Gladstone Library
15 SEP 19

W. E. Gladstone

St. Deiniol's Library
Hawarden. Clwyd.

Founded by
The Rt. Hon. W. E. Gladstone

U
10
22

31
c. 1

327
Heredity
Political Science

HEREDITY AND SOCIETY

By the Same Authors

THE FAMILY AND THE NATION: a Study in Natural Inheritance and Social Responsibility. 8vo. Longmans. 7s. 6d. net.

A HISTORY OF THE LIFE OF COLONEL NATHANIEL WHETHAM, a forgotten Soldier of the Civil Wars. With 6 Maps and Plans and 10 other Illustrations. 8vo. Longmans. 8s. 6d. net.

BACK TO THE LAND: a Medley. Crown 8vo. Longmans. 4s. 6d. net.

RECENT DEVELOPMENT OF PHYSICAL SCIENCE: An Account for the General Reader of the Present Position of Physics. Fourth Edition. Large Crown 8vo. Murray. 5s. net.

STUDIES IN NATURE AND COUNTRY LIFE. A Book for Children and their Parents. Bowes & Bowes. 2s. 6d. net.

AN INTRODUCTION TO EUGENICS. Bowes & Bowes. 1s. net.

HEREDITY AND SOCIETY

BY

WILLIAM CECIL DAMPIER WHETHAM

M.A., F.R.S.

FELLOW AND TUTOR OF TRINITY COLLEGE, CAMBRIDGE

AND

CATHERINE DURNING WHETHAM

HIS WIFE

LONGMANS, GREEN, AND CO.

39 PATERNOSTER ROW, LONDON

NEW YORK, BOMBAY, AND CALCUTTA

1912

All rights reserved

43597

Digitized by the Internet Archive
in 2026

https://archive.org/details/hereditysociety0000will

PREFACE

Since the appearance in 1909 of our book on *The Family and the Nation*, we have published occasional papers and articles extending some of the ideas therein contained. Although the present volume reproduces the substance of some of these papers, the larger portion of it consists of hitherto unprinted work. To prevent the need of reference to the former book, certain sections have been abstracted and re-written, such as the one on the scientific aspect of Variation, and the statistical portion of the chapter on the Birth-rate; but any one who desires to study these and kindred subjects in more detail must consult the earlier volume, especially the chapters on Inheritance and Variation in Mankind, the Inheritance of Mental Defect and Ability, and the Selective Birth-rate. The causes of the decline in the birth-rate are there likewise discussed.

We wish especially to guard against one misconception into which certain of our former readers and reviewers seem to have fallen. Both this book and its predecessor are written avowedly to draw attention to the problem of heredity, a conception which has hardly yet penetrated consciously into modern sociology, where the subject of environment has held hitherto almost limitless sway. We find it necessary continually to point out that improved conditions of life will not

by themselves alone secure certain and corresponding improvement in the inborn qualities of the race. Selection also is needed. We have deliberately concentrated our attention chiefly on one side of a very complex and involved problem. But it is not necessary in actual life to disregard the effects of a better environment in order to realize the importance of the workings of heredity ; and to point out that the present trend of modern civilization produces certain dangers, is not to discourage further attempts to improve the surroundings of mankind, whatever may be felt on the subject by impulsive philanthropists or unresting politicians.

It is clear that social and legislative action is continually changing the average composition of every race, for better or for worse ; yet, for the most part, people are unconscious of the fact. The nation whose rulers first grasp and act on the essential principles of the new knowledge will surely assume a leading position in the rivalry of states, and may quickly and rightfully establish a predominant influence in the realm of international affairs. From this aspect alone, it is desirable to draw attention to the connection between the structure of society and the workings of heredity.

We desire to thank those correspondents, at home, abroad and overseas, who have drawn our attention to various facts bearing on our inquiries, who have sent us pedigrees and notes of family history, and have encouraged by their appreciation, criticism and execration this new presentment of the ideas which we have endeavoured to bring into more general notice.

CAMBRIDGE, *December* 1911.

CONTENTS

CHAPTER I

PAGE

Introduction 1

CHAPTER II

Variation and Heredity 10

CHAPTER III

Natural Selection 32

CHAPTER IV

The Biological Influence of Religion . . . 43

CHAPTER V

The Birth-Rate 57

CHAPTER VI

The Position of Women—A Survey . . . 72

CHAPTER VII

The Present Position of Women 88

CHAPTER VIII

PAGE
The Problem of Education 104

CHAPTER IX

Heredity and Politics 123

CHAPTER X

The Purpose of Life 164

CHAPTER I

INTRODUCTION

In all the races of mankind, and even in the higher species of the animal kingdom, the family, in one or other of its many forms, is the unit of the communal life and forms the basis of the social structure. In all times and in all civilizations, tradition, custom and law have worked together to strengthen and consolidate the ties of kinship, recognizing therein, consciously or unconsciously, an essential factor in any stable and successful society.

The natural ties of affection and dependence which bind husband to wife, parent to child, kinsman to kinsman—ties without which the human race could never have succeeded in establishing itself in a position of predominance on the earth—are far more deeply engrained in our species than others which depend merely on habits of association or relations of mutual benefit or convenience. Even under the artificial conditions of much of our modern civilization, under social and economic pressure tending to break up and disintegrate the natural and fundamental relations of life, it remains true, times without number, that blood is thicker than water.

This universal recognition of the family as the true social unit and of the ties of kinship as the most powerful of binding forces is in effect a tacit recognition of the part played by heredity in fashioning human society. Were there to exist no correlation of qualities between parents and children, brothers and sisters, kinsmen and kinswomen, either in physical or mental characteristics, the problem of forming coherent societies and of creating and maintaining an environment suitable for succeeding generations would be insoluble. It is because persons belonging to the same race have certain definite characters in common that they are capable of thriving in the same conditions of climate, in the same mental and moral atmosphere, of undertaking the same class of labour, of resisting the same diseases. Thus the human populations of the globe, like the flora and fauna, have separated out into the various species, inhabiting in comfort the different geographical zones, and showing marked differences of appearance, of capacities, of requirements. It is because families who are united by ties of blood are in like manner, but to a less marked degree, separated off from their fellow-men, that it has been possible for the individuals of each race, as for animals, to differentiate among themselves and to develop and extend the various manifestations of those qualities inherent in the human race which are essential to the increasing complexity of modern civilization. In the same way the exigencies of natural selection and of human need have divided the qualities inherent in the equine race between the hardihood of the Shetland pony, the strength of the Clydesdale or Shire horse, and the speed and mettle of

the thoroughbred racer. No one animal could possess the qualities of all three.

From the practical point of view of daily life, the influence of heredity is constantly taken into account. An acquaintance with the family is found to give an insight and a completion to our knowledge of the individual, his capacities, his character, his strong points and his failings. A man of whose parentage and antecedents nothing is known remains of necessity a stranger long after he himself has ceased to provide any cause for surprise or suspicion. Yet when his offspring stand before us, the surprise may return and deepen into dismay, and the suspicions which had been lulled into forgetfulness may arise and transform themselves into some lamentable certainty.

The family may be considered from many points of view. It has a political aspect, a romantic aspect, an economic aspect, a religious aspect. From each of these points of view it has been considered by the leaders of thought of every succeeding generation. But, during the last century, which may be called the scientific age, while the co-ordination of natural knowledge has gradually been illuminating many of the dark places of the human intelligence, we have come to see that the family has also a scientific or biological aspect. From this last standpoint, especially in the light of our growing knowledge of heredity, we are chiefly to deal with it here.

Time was—and not many decades ago—when the biological views of Lamarck of the inheritance by offspring of characteristics acquired during life by

their parents were applied confidently to the phenomena of social evolution. The comfortable and optimistic doctrine was preached that we had only to improve one generation by more healthy surroundings, or by better education, and, by the mere action of heredity, the next generation would begin on a higher level of natural endowments than its predecessor. And so, from generation to generation, on this theory, we could hope continually to raise the inborn character of a race in an unlimited progress of cumulative improvement.

Much of the impetus given to educational and philanthropic work during the past century seems to have been due to the spread of this belief, which had been put aside by most men of science almost before its effects were felt among the general public. A multitude of workers arose who were inspired by a zeal for social service and unselfish travail and endeavoured to realize the vision of universal well-being which the discredited doctrine had dangled before their eyes.

But, half a century ago, Lamarck's explanation of evolution was replaced by that of Darwin ; and, of recent years, the work of Weissmann and others has led biologists to doubt more and more whether characters acquired during life by the action of the environment are inherited at all by the offspring. Yet, deceived by their hopes and aspirations, and led astray by incorrect elementary knowledge, our philanthropists, and still more our politicians, continued to talk and act as though improvement in the mere material surroundings of life would, of itself and

unaided, suffice to improve the race. Had they but watched the results and understood the methods of practical cattle-breeders, whose labours, though still in the empirical stage, were already transforming the nature of our flocks and herds, they would have appreciated the fact that improvement in the environment alone would do little for a race compared with the transcendent power of selective breeding.

Nevertheless, improvement in surroundings and social conditions represents the only conscious share taken hitherto by man in raising the level of his race, and for its own sake, it is worthy of the efforts made to secure it. But the measures used to bring about such an amelioration require to be scrutinized carefully, both in regard to their immediate effects and to their possible indirect influence on future generations.

From the racial point of view, there is at least one advantage in lightening the pressure of circumstances on the lower ranks of society. There are always a certain number of families at the bottom of each social stratum that have fallen through accident, such as the death or ill-health of the bread-winner, a change of trade, or other external cause. With improved surroundings and greater opportunities of self-help, people of this type will readily separate themselves out from the families who have fallen into the depths by reason of the badness of their inborn qualities. Thus a new classification is obtained, which is of real value from the point of view of the race. Fresh recruits are obtained for the effective sections of the communal life, and the residue can be more justly dealt with as a separate problem of degeneration.

Any movement among the population which tends to bring about a more correct segregation of the different classes eases the conditions in which the biological factor can accomplish its mission. Indeed, from one point of view, the work of civilization has been to differentiate between one type of character and ability and another, and to fit each, as far as possible, into that portion of the social structure where it can be of the greatest value. There is no record of any race that has risen into prominence without having first of all undergone a lengthy process of careful graduation. A disintegration of society and the breaking up of these natural divisions seems to be a preliminary step in national decay.

Doubtless material improvement in the physical conditions of mankind benefits the present generation by easing the circumstances of life, and lessening the struggle for existence among those least able to bear it; doubtless it even raises somewhat the next generation by improving the conditions of its nurture in infancy. But the process has definite limits, quickly reached. There are even, as we shall see later on, special dangers attached to any progressive lowering of the standard of individual exertion necessary to maintain a family in a position of independence.

But, if races are not moulded by the inheritance of the powers and qualities imprinted on each generation by education, training and environment, to what are we to look to explain the undoubted changes in race which have gone on in the past? Progress there has certainly been; and every believer in the future of the human

race must look forward most ardently to further progress and to the evolution of a higher and more constant type of humanity. Yet we know that the slow upward progress of mankind has not moved evenly on its way ; that there have been catastrophes and disasters on a large scale ; that nations of great promise have been wiped out ; that empires have disappeared ; that civilizations of old standing and high achievement have vanished ; that nations, empires and civilizations have crumbled away at the first touch of contact with some despised, barbaric, untamed people, whose only merit was the purity and vigour of their stock, the simplicity of their habits, and the sanctity and strength of their family life.

Looking back down long vistas of history, at the wrecks of great nations, we may well ask what agency we may invoke to prevent the deterioration of our race in time to come, and to secure its regeneration at the fount of strength, virtue and virility.

If we are to reckon as inadequate efforts permanently to improve a race by alterations in the conditions of life, by improvement in education and hygiene, by equalization of opportunity and of the fruits of achievement, the necessary complement is some process of natural selection, that survival and preponderating reproduction of the fittest, the theory of which was first clearly stated by Darwin and Wallace, and has been amplified, corrected and extended by many biologists since first they propounded it.

And here another caution is necessary. The "fittest" in the process of natural selection are the fittest for the existing environment. If the environ-

ment favour worthy qualities, the fittest are also the worthiest, and all is well. But if the environment be such that bad qualities are an advantage to their possessor, those bad qualities secure a preponderating reproduction, and the racial progress may be downhill. Hence once more we see the need of scrutinizing proposed changes in the environment from the point of view of natural selection and heredity.

But it is in modifying the external conditions of life that the dominion of men on this globe has registered its greatest successes, and it is unfortunately possible for a time artificially to create circumstances in which the least admirable qualities can thrive and secure a preponderating reproduction quite as easily as to maintain those where industry, foresight and ability receive their due reward.

Natural selection and the survival of the fittest, then, will not of themselves perform miracles of regeneration. They represent the method followed by the workings of heredity. Where the human race is concerned, men have now the power consciously to direct them into barren or into profitable channels. The whole fate of civilization hangs on the question of whether this mighty engine of construction or destruction is to be used for good or evil.

It is not a mere phrase to say that our knowledge of the workings of natural selection, our conceptions of the range and influence of heredity, have advanced by leaps and bounds during the past twenty years. There is no branch of scientific inquiry which has attracted keener and better equipped brains to its service, or of which the results are more fraught

with the knowledge of good and evil for the whole human race.

It is impossible here, in the short space at our disposal, to give any just idea of the methods by which this knowledge has been acquired or of its extent and authority. Here we can only summarize and simplify a few of the results, which we have set forth at greater length in a previous work.[1]

[1] *The Family and the Nation*, 1909.

CHAPTER II

VARIATION AND HEREDITY

The individuals of every race of living things vary among themselves. No one is exactly like any other. Even sheep can be distinguished by their shepherd, Members of Parliament by the Speaker. Some are taller, some shorter than the average. Some are brighter and some are duller ; some are morally better and some are morally worse. A part of these variations may be due to differences in fortune, upbringing and surroundings—how much it is impossible to say. A naturally tall man may be stunted by slum life, or add half an inch to his stature by physical exercise. A dunce may have a modicum of knowledge beaten into his head, and a man on the border of crime may be reclaimed by love or fear. But these acquirements or alterations in a man depend again on his innate susceptibility to the stick or to an appeal to his better feelings. These impressed variations are not inherited directly by his offspring, although the tendency to receive them may be handed down. We have taught many generations to read without seeing the slightest prospect of giving birth to a generation endowed with an innate knowledge of the alphabet, although the

children of apt scholars will ofttimes emulate the parental achievement of "teaching themselves to read" as the saying goes. It is this inborn part of a man's endowment which tends to appear again in his descendants.

On the results of large numbers of measurements, we find that the sons of naturally tall fathers are taller than the average, and that the children of able and industrious parents show a higher level of ability and require less attention and expenditure of energy to enable them to attain an average standard of achievement than do the bulk of the population. The children of habitual criminals more often show vicious tendencies even in youth, while the offspring of mentally defective parents are themselves feeble-minded. Do men gather grapes of thorns or figs of thistles?

It is on these inborn variations that selection has to work. Some variations will give a man an advantage in the struggle for life; some will cause him more easily to succumb. In a primitive community, where the forces of heredity are acting naturally, unconsciously and effectively, men of the first type will tend to live and beget offspring; men of the second type will more often die in infancy or youth, and either leave no progeny or leave them with but precarious chances of survival. Thus the more favourable variations tend to appear by the process of heredity in the next generation, while the unfavourable variations tend to get stamped out. In this way the race is continually more and more moulded to fit its environment; it is relieved of the strains of blood of the failures which tend more and more to become encumbrances on the better stocks,

and it finds itself more and more able to overcome the difficulties which beset its upward path.

Such, in broad outline, is the scheme of natural selection as put forward by Darwin to explain the process of organic evolution, and to account for the origin of different species of plants and animals. Whether or no it be capable of working all the wonders of creation which naturalists have assigned to it, or whether eventually we shall have to look behind its mechanism to some non-mechanical creative energy which uses matter as its medium, natural selection, be it cause or means, must still be effective in modifying the average character of existing species. Hence arises the importance of tracing its action in civilized communities, and of investigating the causes which are now at work as efficient selective agencies.

For the sake of convenience, if for no more fundamental reason, variation may be divided into two kinds: continuous and discontinuous. In continuous variation we have every possible value of the character throughout wide limits. Thus it would be possible to find men for every tenth of an inch of stature between 5 feet and 6 feet 4 inches, though the numbers are greatest for those values nearest the average height of 5 feet 8 inches. On the other hand, variation sometimes occurs in definite steps. A flower has either four petals or five, a man either has or has not brown pigment in his eyes.

Continuous variation is much the more common, and, till recently, it alone was studied by biologists. Of late years, however, much attention has been paid

to discontinuous variation, and the investigations of Bateson and others, founded on the rediscovered work of Gregor Mendel, abbot of Brünn, have brought to light many definite laws.

As an example of these laws, let us take the case of eye-colour. While many grades are known in the intensity of brown colouration, it is possible to say whether brown pigment is present at all. Its presence and absence are contrasted characteristics. Now the presence of brown pigment in the eye seems to be associated with a definite character in the germ cells of the individual. If that character be present in all the germ cells of either parent, all the offspring will possess brown eyes. If neither parent possesses it, the eyes of none of the children will contain brown pigment, they will all be grey or blue. The brown colour is what is called a dominant character—it always shows if it be present. Greyness or blueness is simply due to the absence of brown. If one parent is pure-bred "blue" and the other pure-bred "brown," all the children will be brown-eyed. Hence while brownness is said to be dominant, blueness is said to be "recessive."

But the brown-eyed children of a mixed couple will not be pure-bred with regard to eye-colour, though, owing to its dominant character, brownness shows in all their eyes. Half their germ cells will carry the brown character, and half not. Hence, by the theory of chances, if two such half-bred individuals mate, one quarter of their children will, on the average, be developed from the union of two "brown" germ cells and be pure-bred "browns," one quarter will be produced by the union of two "blue" cells and be pure-

bred "blues," while two quarters will be produced by the union of two cells, one "brown" and one "blue," and be cross-bred with regard to eye-colour like their parents. And like them, since brown is dominant, their eyes will contain brown pigment, like those of their pure-bred "brown" brothers and sisters.

If we denote an individual with the dominant character as D and one with the recessive character as R we get the scheme:

A "dominant" marries a "recessive" and has offspring D × R

all cross-bred but outwardly resembling the dominant DR × DR

One of these cross-breeds marries a similar cross-breed and has offspring

equally divided between (1) pure-bred "dominants," (2) mixed-bred "dominants recessives," (3) mixed-bred "recessive-dominants," (4) pure-bred recessives. (2) and (3) are identical.

DD	DR	RD	RR
(1)	(2)	(3)	(4)

Now, as long as the pure dominants at one end and the pure recessives at the other find mates similar to themselves with respect to the character considered, they breed true, notwithstanding their mixed parentage. The individuals called DR or RD, however, contain the recessive character concealed in their germ cells, whence it may reappear in their offspring.

There is thus an essential difference in the inheritance of a character, according as it is dominant or recessive. A dominant character, whether good or evil, will show if it be present. If an abnormality be dominant, normal people will never reproduce it, even though born of an abnormal family, for, as they do not show the character, they are free from it. Certain physical deformities have been shown to be dominant characters.

But, if the character be recessive, it may lie concealed in the germ cells of some of those who outwardly show no sign of it. Some forms of deaf-mutism seem to be recessive. Hence it is specially dangerous for normal folk who both come from deaf-mute stock to intermarry. The defect is likely to reappear in their children. Some types of mental defect show the same relations. A pair both of whom are afflicted breed "true"; they produce none but feeble-minded offspring. A pair who are themselves normal but come from weak-minded stocks, will find about one quarter of their children mentally defective.

It will now be seen how essential it is to extend our knowledge of these forms of Mendelian inheritance. In these cases, we can predict the probable or certain result of a proposed marriage, and foretell whether it should or should not be entered upon.

We have begun with those cases in which simple Mendelian inheritance already has been made out, because, in the present state of our knowledge, in them alone we can predict the probable average composition of a large family if we know the family history of the parents. But Mendel's laws have been demonstrated as yet for only a few cases of human inheritance, and for most characters we are thrown back upon vaguer methods of inquiry.

Let us take a typical instance of continuous variation, such as difference in stature. Let us suppose that the average height of the men in a certain race is 5 feet 8 inches. Let us select as many fathers as we can find whose height is approximately 6 feet—that is, 4 inches more than the average. A measurement of the height

of the sons of any one of them would tell us very little. Any one family might be affected by quite accidental circumstances. But, if we measure the height of all the sons of all our many six-foot fathers, the accidental circumstances will tell as often in one direction as in the other, and we shall be able to discover whether or no, on the average, the sons of tall fathers exceed the normal height of the race. As a matter of fact, we shall find that the average height of the sons in the case we have taken will be very nearly 5 feet 10 inches—that is, 2 inches more than the average. Their mean deviation from the normal is just about half that of their fathers. In this case, we have said nothing about the mothers. Had we restricted our choice of six-foot fathers to those who had married women as much taller than the average for women as they themselves were taller than the average for men, we should have found that the sons would, on the results of large numbers, have more nearly approached the average abnormal height of their parents, but that they would still have fallen somewhat short of that excessive stature.

Let us now return to the relation between one parent and his children of the same sex. We may express the fact that the children deviate from the mean by one-half as much as the parent by saying that the "coefficient of correlation" for that particular character is one-half, or 0·5.

Turning to mental characteristics, we have greater difficulty in exact measurement. But the marks of candidates in an examination give a favourable instance of variation. In a good examination, when the

number of candidates is large, the marks are found to group themselves round a mean value in just the same way as do the figures expressing the stature of a number of men of the same race. Most candidates obtain marks in the neighbourhood of 50 per cent. of the total, while fewer and fewer candidates are found as we get nearer to zero at one end and to 100 per cent. at the other. If the results group themselves in an irregular manner either at one end or the other of the scale, it is fair to assume that either the papers, the candidates or the examiners were unsuited to the occasion.

To estimate the intensity of inheritance in these mental characters, the positions in the Oxford University class-lists of a large number of fathers and their sons were compared, and the relative position in the forms of public schools of brothers, between whom, of course, there should be correlation if heredity is strong, since they have the same parentage. In the case both of parental inheritance and of fraternal relationship, the coefficients of correlation were found closely to agree with those for physical characters. Thus we obtain one class of evidence bearing on the important result that mental qualities are inherited in the same way, and with the same intensity, as are physical characters. We may not be able to predict the mental powers of any given family in the same exact way in which we can foretell its probable composition with regard to the physical characters for which definite Mendelian inheritance has already been made out ; but, if we consider, not one family, but a large number of families, the results statistically are no less accurate and

predetermined. Just as we know, from the Registrar-General's returns for past years, approximately how many people in the coming year will die between the ages of fifty and sixty, and how many will die between sixty and seventy, though we cannot predict the death of any one individual, so we can tell from previous investigations on heredity, if we deal with large numbers, how many of the children of different types of parents will show the parental characteristics.

In order to make sure that we are not deceived by casual coincidences, it is necessary, when we are investigating the inheritance of any specific character, to study statistically large numbers. A single family pedigree, unless it be an extensive one, and unless it show definite Mendelian phenomena, is not enough to prove a case, although it may and frequently does suggest valuable lines of inquiry. Nevertheless, single pedigrees may well be used for purposes of illustration.

Galton called attention to the eminence and permanence of the ability created by the intermarriages of the families of Montagu, Sidney and North, from the sixteenth to the eighteenth century. In the remarkable pedigree of these interrelated families as given by Galton, we find recorded four Chief Justices, one Lord Chancellor, seven other Judges, two Ambassadors, two well-known Statesmen, two Viceroys, one Lord High Admiral, one Bishop, one Abbot, and eight other men or women distinguished in some branch of learning; while no less than thirteen separate peerages were won by members of these families during the period under review.

In later times the family of Grey has produced some

eighteen men of great ability. Among them were three Cabinet Ministers, three Generals, two Admirals and one other distinguished sailor who was created a K.C.B. and a Baronet, one Bishop, one Governor and one Governor-General.

As an illustration of the inheritance of scientific ability we may take the doubly related families of Darwin and Wedgwood, and the allied family of Galton—a specially appropriate example for the purpose in hand. Beginning in the middle of the eighteenth century with Erasmus Darwin, Josiah Wedgwood and S. G. Galton, in five generations these interconnected families have produced no less that sixteen men of marked scientific attainments, of whom nine were Fellows of the Royal Society.

In all such cases, the reproduction of ability seems chiefly to depend on a right choice of mates. It is well for a country when its able families of special types consort together socially, so that the rising generation naturally select their partners from an appropriate circle of like ability to their own.

The effect of this association is brought out clearly by an inquiry[1] made by the present writers into the ancestry and offspring of men of ability, on the lines of Galton's classical work on the subject, but with the advantage of the more modern material collected in the pages of the *Dictionary of National Biography*. Names of men living between the years 1720 and 1820 were taken from a portion of the *Dictionary*. A notice of twenty lines in the summary contained in the index

[1] *Nineteenth Century and After*, May 1911.

volume was accepted as a standard of eminence, while admission to the *Dictionary* was received as proof of distinction. It was found necessary to divide the names into three groups.

The first group included thirty-one names of men who were born into families possessing a peerage or who themselves received peerages. Nearly the whole of these men distinguished themselves in politics or administration, either civil, military or diplomatic. According to the standard given by admission to the *Dictionary* they had fifty-four relatives of distinction on their fathers' side, forty-six on the mothers', while forty-one were descendants of the parents of the eminent men. These thirty-one men had between them one hundred and forty-one separate relatives of distinction, or about 4·5 apiece, of whom the great majority showed ability of the same type as their own.

The second group consisted of men of similar characteristics to the first group, with the exception of the fact that they neither received peerages nor belonged to families possessing that distinction. Here we find that eleven men give but six (possibly seven) able relatives, none of whom were on the side of the mother.

The third group contained fifty-eight men of distinction drawn from all classes, including some of the great names of English life and thought during the eighteenth century. These men have a total of sixty-one relatives of distinction, or about one apiece, as compared with the 4·5 realised by the first group. Thirty-two of these persons are on the fathers' side, twenty-three are descendants of the parents, and only

six can be assigned to the mothers' family. Of these relatives of ability the Wesley family is responsible for nine, while the Wordsworths supply six and the Wollastons four. These three families afford an instructive example of the persistence of talent, owing to a series of appropriate marriages.

These results are certainly striking, and at first sight one might be tempted to think that high administrative capacity was heritable, and the other aptitudes, artistic, literary, inventive, were not so or were only heritable in a much less degree.

A superficial explanation of these differences might refer them all to the family influence possessed by members of the first group, who had attained to the rank of a peerage. As regards the descendants and younger relatives of the men of distinction, such a consideration must probably be taken into account. But on a closer examination it seems to be insufficient to explain the results. It would be a bold man who would refer to the influence of a great official the success of grandparents and great-uncles, living before the birth of the fortunate man who obtained the peerage. Yet the figures show that it is as necessary to explain the pre-eminence of the forebears as the distinction of the descendants, so that, with all due allowance for family interest, it seems more rational to endeavour to find a further reason which will account for both phenomena.

It must be remembered, too, that the *Dictionary of National Biography* professes to notice merit, ability and eminence, and not merely high station or important office. Moreover, it is impossible to study its pages

without coming to the conclusion that ability of a literary or scientific kind is more fully recognized than that which shows itself in successful administration—the special characteristic of the first class—so that the record of the numerical proportion of all relatives is actually weighted against the type that comes out at the head of the list. Again, the anomalous position of Lords Thurlow, Eldon and Stowell — who have practically no relatives of distinction—shows that even the position of Lord Chancellor, with its extraordinary opportunities in the disposal of patronage, is unable to discover ability in a family circle where it does not exist in reality. In the same way, in the third group, Sir Joshua Reynolds and Sir Christopher Wren, both of whom attained social positions leaving nothing to be desired, were nevertheless unable to point to a younger generation who should follow in their footsteps, whereas the Wesleys, Wordsworths and Wollastons, intermarrying for several generations with families of corresponding qualities, show all the phenomena of recurrent distinction chiefly associated with members of the first group.

But a careful study of the biographical details reveals to us that the key to the mystery lies in the marriage of the men and their relation to their social surroundings. From this point of view, the difference in the number of relatives of distinction to be found in each group in the families of the mothers is of great importance. When we turn to the list of names in our first group, read their family histories and recall the gradual building up of the social life of the country, we are aware that, through long centuries, much of the national

stock of political, administrative, military and legal talent had been separated out by a process of like-to-like mating and the formation of a class, which, if not apart, was undoubtedly distinct, from the general mass of the population. Now administrative ability is essential to a nation at every stage of its development, and consequently has been sorted out earlier and possibly to a greater extent than any other characteristic, as an essential accompaniment of successful national development through the last thousand years of history. From intermarriages among the picked members of this class, we obtained a constant and assured succession of men of a certain type of ability and character.

In the case of the second and third groups, which deal for the most part with men in whose families there is little or no previous record of ability, it seems as if the particular marriage of the parents had brought the required elements together in a manner which could not have been foreseen. Out of the hundreds of thousands of chance alliances, usually in the middle classes and seldom of a very low social standard, some one marriage will give birth to a man of eminence, but, in what department of life he will be eminent, there is no means of predicting.

This point is emphasized by the more frequent appearance of ability of the same type in the brothers and sisters of the eminent man of this class rather than among his other relatives. We may recall the sisters Brontë, the brothers Tennyson, the Rossetti family, and other fraternal groups which could be added to that of Reynolds and his sister, Romney and his brother, the brothers Wilberforce, the two Southeys,

the Scott brothers, the Thurlow brothers, the two Wordsworth groups and the two pairs of Wesley brothers. It seems clear that in the second and third groups we have usually to consider persons who are exceptions to their social surroundings and naturally belong to the classes where the satisfactory performance of daily duties rarely brings with it any public notice.

This aspect of our subject leads us to inquire into the sociological meaning of the groups of men of differing types and professions which we recognize in our midst. Owing to the localized geographical distribution of the various branches of industry throughout the country, we have probably whole classes of persons, more or less distinct from each other in physical and mental qualifications, where marked administrative, commercial, industrial or technical ability have been segregated, and exist, duly graded, from top to bottom of the group.

This differentiation of type, as an essential concomitant of civilization, is probably the origin of the class distinctions which exist among us, and which, sometimes crystallizing out into a "caste" system, have existed as far as we can tell in every civilization. It is evident that a much higher and more certain proportion of ability of any required sort can be obtained through persistent social association, with its corollary of like-to-like mating, rather than by any chance system of general settlement and mingled intermarriage.

Very little work has yet been undertaken to throw light on the sociological principles which underlie these questions, but all the evidence available goes to show

that the class association by which we obtain segregation of type and specialization of innate endowments has a real evolutionary meaning, corresponding to the increasing complexity of social requirements, and is probably playing some useful part in the biological development of the human race.

Turning to the other side of the picture, we are met by terrible instances of families in which physical unsoundness, mental defect and criminal propensities are inherited from generation to generation in unfailing succession. The classical instance is the family to which the pseudonym of "Jukes" has been given by their historian. The pedigree contains some 830 known individuals, all descended from five sisters born about 1760. A large proportion of these individuals have been in prison, some of them for serious crimes. Frequently, the women have consorted with criminals of other stocks. Many of the race have been paupers, supported wholly or partly by the community. The total direct loss to their country caused by this one family has been estimated at about £260,000, while the indirect loss is probably much greater.

The study of criminal types has of late years become a branch of penal jurisprudence, and owes much of its success to the labours and stimulus of the Italian criminologist, Cesare Lombroso. The modern school of criminology has made a careful investigation of criminals of various types, and has shown that they exhibit numerous anomalies in facial structure, in skeletal peculiarities, in nervous conditions which

denote a close relationship between certain types of habitual criminals and the savage, and lead to the conclusion that criminal tendencies are often due to a reversion towards a primitive and lower type of humanity. Occasionally they exhibit structural abnormalities, especially in the brain, characteristic, not only of primitive savages, but of still lower types, as far back as the carnivora.

These born criminals, known to come, wherever their ancestry can be traced, out of families already overburdened with a history of crime, are believed to constitute about one-third of the mass of offenders—as far as Italian statistics are concerned. They form the most important part of the offenders, for their crimes are usually of a peculiarly monstrous character, and they reappear before the public notice almost as soon as they are set at liberty. Heredity, according to Lombroso, is the principal organic cause of criminal tendencies: direct heredity from criminal parentage; indirect heredity from a generically degenerate family, showing also frequent cases of insanity, deafness, syphilis, epilepsy and alcoholism among its members. Almost all forms of chronic constitutional disease, especially those of a nervous character, may give rise to criminality in the descendants.

Lombroso considers that certain villages in Italy which are hotbeds of crime probably owe their preeminence to ethnical causes. The frequency of homicide in Calabria, Sicily and Sardinia he attributes to a large admixture of African and Oriental elements in the population.

Of the second class of criminals, those drawn from

degenerate families, not necessarily with a previous history of violent crime, who form another third of the population of the police courts and prisons, it is probably true to say that many of them are at times morally insane. They have physical and mental characteristics in common with both the born criminal and the epileptic; but, unlike the born criminal, they frequently exhibit remorse for their crimes, and between their outbreaks are amenable to the influence of a good environment. It is an open question how far their criminal actions are committed during some suspension or alteration of the intellectual and moral faculties, in which case they can hardly be said to be responsible for their doings, although they are none the less dangerous to the community.

Some of the Continental criminologists class hysteria, usually considered to be a distinct disease, as a mild form of epilepsy, especially prevalent among women. This condition also is traced to hereditary influences, similar to those found in cases of actual epilepsy, and is also transmitted by neurotic and inebriate parents; although, like epilepsy, it is occasionally due to illness, such as meningitis, to a fall, a blow, or a fright. Hysterical patients are known to be profoundly egoistical, and are frequently willing to do anything to attract attention, whether favourable or unfavourable, a peculiarity of many recognizedly insane persons. Lombroso notes that hysterical women take special delight in slandering and bringing false accusations, charging their servants and neighbours with dishonesty, their male relatives with indifference, neglect or indecency, and that anonymous letter-writing, with

these intents, is so common among hysterical persons that it may be considered almost an indication of the existence of the condition.

Although statistics from every country show that women contribute a very small share of the serious crime of a nation—probably not more than ten per cent., —yet a careful physical and anatomical examination of the women who have led immoral lives discloses the fact that it is they, rather than the occasional female offender, who exhibit a large proportion of those deviations from the normal type, which are associated with men classed by Lombroso as born criminals. According to this mode of calculation, on the biometric basis, there is but a very slight difference in criminality between the two sexes, leaving perhaps a slight predominance of criminal instincts among women. The history of the "Jukes" family, already referred to, bears out this classification.

Instances of families which, generation after generation, are an expense to the community and a danger to the race are given in the Poor Law number of the *Eugenics Review* (November 1910). It is there shown that a large proportion of the so-called able-bodied paupers are the victims of congenital defect either of mind or body. Pedigree after pedigree is given illustrating the recurrence of persistent pauperism for three, four or five generations in one family or group of allied families. As an instance we may take a case where the history of five generations comprising 111 individuals is set forth. This total is made up of 34 chronic or permanent paupers, 21 occasional paupers, 21 children who died young, while

only the remaining 35 are not known to have been chargeable on the rates.

With such results before us we may well despair of solving the problem of the poor law by administrative changes alone. "To aim at economic change, without seeking to change the quality of the human element, is to waste good energy to no purpose."

Many diseases which are themselves infectious, and propagated by infection, are much more prevalent or much more fatal in certain families than in others—much more so than the increased chances of infection would warrant. While the disease itself is not hereditary, the predisposition to the disease is hereditary. With a disease like tuberculosis, which is so prevalent in this country that everyone is exposed more or less to the risk of infection—certainly everyone living in the crowded quarters of towns—the chances of escape or attack depend very largely indeed on comparative immunity or susceptibility. Pedigrees can be given showing that, with specially tuberculous stock, an enormous proportion of the individuals are attacked. They would not have been attacked without infection, but, equally, they would have escaped untouched had they been more resistant to the disease.

Certain types of mental defect are definitely hereditary. Two feeble-minded parents of these types seem never to produce a normal child. Defective families are well known in every district to those who, with their eyes open, administer poor relief or justice—families of which some or all of the members, generation after generation, have to be supported by

the State—that is, by the labour of their more competent fellow-men. They fill the workhouses, for they cannot regularly support themselves ; they fill the prisons, for much of the petty crime of the country is due to feebleness of mind and is simply a hereditary disease. Feeble-minded women are specially prolific, and return again and again to the maternity wards of our hospitals and infirmaries to add yet another to the defective population. Several years ago, a Royal Commission reported in favour of the compulsory and permanent care and detention of the feeble-minded ; but nothing has yet been done to carry their recommendations into effect. Every year of delay in meeting this urgent evil means a new crop of victims falling inevitably and irretrievably into the worst forms of degradation, and an ever-growing number of defective offspring, brought into the world to be a burden and a shame to the rest of the nation.

It must always be remembered that the existence of this class of people is directly due to that interference with natural selection which is the outcome of the unregulated humanitarianism of Western society. While failing to give them the protection which is necessary to their enfeebled mental powers, the State has nevertheless created conditions which make possible their continued and successful reproduction. As we have said before, in a primitive community, types much below the average of the tribe either in mental or physical capacity can neither maintain their footing, nor earn the means of subsistence. Consequently their defect dies with them, and the purification of the race is assured. Nations of a somewhat more advanced

social organization have thought it right to take steps to prevent any persistent degradation of the racial type. It is said that the inhabitants of China and Japan are, at present, free from the burden of maintaining any sort of lunatic or idiot asylum, and that the existence of families in their midst handing on from generation to generation a definite form of mental defect is unknown among them, and would be considered a degradation too great to be contemplated. If these statements be confirmed, it will be interesting to see whether their immunity can be preserved in the face of the introduction of Western ideals.

CHAPTER III

NATURAL SELECTION

In the animal kingdom, and in primitive races of men, want of strength, agility or fleetness is often fatal. These qualities consequently have selective value in the struggle for survival of the fittest. But among the civilized nations of mankind, especially among urban populations, it is probable that the most effective agent in the process of natural selection is disease. A host of infantile disorders sweeps off a hecatomb of victims every year. Those of specially weakly constitution, and those specially susceptible to the specific diseases which are rife, succumb more easily and more rapidly. Fewer of them live to maturity, and fewer of them live to hand on their hereditary qualities to offspring. Thus the race is gradually purified from the taint of general weakness of constitution, and from special liability to the attacks of specific diseases.

It is impossible to doubt that comparative susceptibility to and immunity from definite diseases have played a great part in the history of mankind. Before the world was made one by facility of communication, different races dwelt in comparative isolation. Each race had its own maladies, and nature took every pains

to render it immune against those particular diseases. When, by exploration or conquest, two races, hitherto separate, came into close contact, each infected the other with new diseases, against which the infected had none of the protection given by centuries of stringent selection.

The classical instance is the conquest of the New World by the diseases of those who followed Columbus. The East was full of teeming cities, in which centuries of infection had selected the most resistant stocks. In the West men lived a nomad life where there was no need for selective protection against the microbic diseases of crowded communities. As Dr Archdall Reid says: "On the one side of the Atlantic were peoples who for thousands or tens of thousands of years had been slowly evolving resisting power against a multitude of maladies . . . on the other side of the Atlantic were peoples who had undergone no evolution against any zymotic disease except malaria. . . . At once . . . diseases began to sweep in great waves of pestilence over the whole vast regions of the West. The entire population was susceptible; and therefore almost every individual was stricken down. . . . Whole tribes and nations were exterminated. . . . The white colonization of Australasia is having similar results. In Polynesia, as soon as the trader brings his clothes and the missionary insists on his converts wearing them and attending crowded churches and schools, the work of extermination begins."

A process, similar to that which is slowly rendering the nations of the world more and more immune to specific diseases, has been going on with regard to

alcoholic excess. Those specially susceptible to the charms of alcohol tend to die younger than those able to resist. In natural conditions, therefore, they tend to leave fewer children, and the race gradually contains fewer and fewer individuals liable to alcoholism. In classical times, the Mediterranean races were comparatively drunken. Now, after centuries of easy access to alcohol, they are very sober. Were they denied access to alcohol, they would tend to revert once more to a renewed liability to drink. The same process of the slow elimination of alcoholic strains has been at work in Northern races. Selection, aided doubtless by the efforts of the advocates of temperance, is making them more sober. But, as in so many other cases, it is possible that the process of selection has now been affected by the voluntary limitation of the birth-rate of the last forty years. The sober and cautious may now have fewer children than the reckless and drunken, and the race may tend to revert to a greater love for alcohol.

Even with diseases that are commonly accepted as infectious, such as tuberculosis, these considerations should not be overlooked. Of late years so much stress has been laid on the prevention of tubercular infection that we are apt to forget that, while the disease is definitely microbic and infective, the tendency to the disease is as definitely hereditary. For instance, there is evidence to show that there is less transmission between husbands and wives than between parents and children or brothers and sisters, where contiguity is complicated with consanguinity.

But, since a tuberculous tendency is hereditary, and

since those specially liable to the disease tend to die young and leave fewer offspring, natural selection is increasing the immunity of our race to this scourge. By cutting off those strains of blood particularly prone to its attacks, nature is purifying the race from susceptibility.

It follows that, in considering the advisability of extending the "crusade against consumption," in building endless sanatoria for the patients, and expending vast sums of public money on curative measures generally, we must carefully scan the proposed course of action to discover whether we are or are not sacrificing the welfare of numberless generations of the future to secure the prolongation of the lives of some of the sufferers in the present, and indulging our own feelings of compassion at the expense of the future well-being of our descendants.

It seems that, broadly speaking, tuberculous patients may be divided into two groups, one of which consists of those who easily throw off the disease in favourable circumstances, and one where the susceptibility is so great that treatment can only be ameliorative. Dr A. F. Tredgold says :

"It is calculated that in the United Kingdom no less than 90,000 people die annually from some form of tuberculosis. This number is enormous, and yet clinical experience and post-mortem examinations give reason for thinking that probably another 90,000 become infected with the disease but make a complete recovery. What is the explanation ? No doubt our methods of treatment have enormously improved, but the result, kill or cure, really depends to a very great

extent upon the vital resistance of the individual. The majority of persons of sound constitution will, under proper treatment, recover from consumption with very little impairment. The majority of those of enfeebled constitution will die in spite of any treatment. In some cases the inability to throw off tuberculosis may be special and not part of any general unfitness; but in most instances it is part and parcel of a general constitutional want of vigour. As showing this we may refer to the correlation between consumption and mental degeneracy. Of all the deaths in a most excellently managed institution for the feeble-minded, no less than two-fifths were from tuberculosis, whilst the mortality from this cause amongst the insane in asylums is at least nine times as great as amongst the general population. And yet the attendants upon these persons very rarely develop the disease."

Now it is clear that, when the best curative treatment is placed within reach of persons of sound constitution who have accidentally acquired tuberculosis, and their complete and permanent recovery is thereby hastened, unmixed good is done. To help the fit to return sooner to remunerative and happy employment is a form of social endeavour which, however out of fashion, is worthy of all encouragement. But, if our efforts are mainly directed towards patching up the enfeebled constitution of tuberculous degenerates with the result that they are able more easily to hand on their defective qualities to another generation, the prospective evil must be weighed carefully against the immediate good.

It is possible that the great liability to tubercle may

be a special and isolated weakness in an otherwise sound individual. In that case, it may well be that he may possess other qualities of such value that, from the point of view of the nation, it may be worth while to encourage his reproduction in the hope that among his offspring may be found some who possess the good characters freed from the taint of susceptibility to this one disease. Restrictive measures may be deferred till we come to deal with those others among his children who are tuberculous with no redeeming features. In such a case, then, the original tuberculous patient with other brilliant qualities may be worth preserving from the racial point of view.

But, as Dr Tredgold says, tuberculosis is too often but an outward and visible sign of an inward weakness which affects the whole constitution, and appears in other members of the same family, if not in the same individual, as general debility, alcoholism, or mental defect. With such a patient, curative treatment may be putting in his power the possibility of perpetuating manifold infirmities, any one of which prevents its possessor from being self-supporting, and dooms him to be a perpetual burden on his more efficient compatriots.

Our modern sense of responsibility and compassion requires that even such a one should be succoured. Nevertheless, it should be made impossible, in clear cases, for those in whom tuberculosis is but a symptom of complete degeneracy, to reproduce their infirmities. Society, which decides to prolong the sufferer's life, must at least protect itself against the imminent danger that that life produces if allowed to perpetuate itself

in defective offspring; or, to put it in another form, we have no right, for the sake of relieving our own present feelings, to make it possible for one man to do such an infinity of harm and sow the seeds of so much unnecessary suffering in the future.

Among the factors in the process of natural selection in civilized nations must be put the pressure of economic causes. Statistics show that in old days in England the number of marriages decreased in years of bad harvests, which used to affect the general economic condition of the whole nation much more than they do now when the industrial population is chiefly fed on foreign food. The decrease in the marriage-rate would affect first the least efficient, and the prudential motive would therefore have a selective value in the right direction. As long as the relative incomes of different families in the same social class is roughly proportional to their industrial efficiency, and as long as people marry and have children as they can afford to do so, the prudential motive tends in selection to breed a more efficient race. But, as we shall see later, the modern habit of restricting the birth-rate modifies profoundly this conclusion; moreover, the recent growth of taxation on the more efficient in order to support in increased comfort the inefficient, and to provide free education and maintenance for their offspring, gives an artificial selective action to modern economic pressure which tends to reproduce the least efficient strains at the expense of the more efficient. To these points we shall return later.

Thus it will be seen that some of the most effective

selective agencies which have been at work among civilized mankind are being weakened in their action by that very improvement in the environment for which the past century has been noted. The criminal is no longer hanged out of hand, to perish with his abnormal physical condition and with his hereditary criminal propensities. The unsuccessful are relieved and the hungry children of unemployed or inefficient work-people are fed. Disease is slackening its hold on our more sanitary towns, and the death-rate is falling in all ranks of life, and especially in those classes where once it was highest. But all these agencies, brutal though they appear to be to us, had selective value, and tended to fit the race more nearly to its environment.

Mr Arthur Balfour has forcibly pointed out the resulting antithesis between the theory of selection, and those humanitarian feelings on which the past fifty years in particular have specially plumed themselves. Ought we then to stop all efforts at hygienic improvement in the interests of the future of the race? Assuredly not; though more knowledge and discrimination would be desirable. A little further analysis shows that the difficulty is more apparent than real. While it is true that disease tends to cut off those with weakly general constitutions who are not satisfactory parents for the next generation, it is no less true that it weakens also those of sound constitution whom it attacks. In this way it may do much harm indirectly, even though its evil effects, being acquired, are not directly hereditary. Moreover, part of its selective effect is exercised against those who, quite sound

otherwise, have, as their one weakness, a special predisposition to that particular disease. Now, useful as immunity from a microbic disease may be in our present imperfect world, it is not the highest ideal for mankind. If we can banish the infection, the heavy cost in life at which nature is protecting the race against that particular malady may be unnecessary. The energy thus saved may more usefully be expended otherwise in other selective processes, and our race may advance in ability, strength or beauty, instead of in immunity to tuberculosis or measles. Doubtless, some suffer from those complaints as a sign of a general unsoundness; but many who succumb may possess valuable properties in other directions—properties which the world can ill afford to lose. As our knowledge grows we may discover how to separate the good qualities from the bad ones, to winnow the chaff from the wheat without losing both. The believer in selection may help forward efforts for the amelioration of the lot of mankind with a clear conscience, provided that it is fully realized that such efforts lessen the pressure of natural selection, and make necessary an artificial selection to take its place. We have been given a growing knowledge of heredity at the same time as an increased skill in improving the environment. There is therefore no excuse for falling into the new dangers blindfold; and to act on one aspect of the knowledge while ignoring the other is as culpable as it is unwise. Any training for social service such as is now becoming frequent is of little or no use unless the principles of heredity are taught and taken into account.

Finally, we must never forget that the process of natural selection is a process of fitting the race to its environment. Evolution does not necessarily imply advance in qualities noble in themselves. The characters which tend to survive in the struggle for life are the characters which are of use to their possessors in the existing circumstances. Change the conditions, and other characters may become of dominant selective value, and gradually permeate the race. This is the most important principle to be borne in mind when, by legislation or alteration in social customs, we are modifying the environment. We must always remember that, besides the immediate and more obvious effects of the changes we are introducing with the object of benefiting an existing section of the population, any adjustment in the environment will necessarily react on the racial changes produced by natural selection. It will affect in some way the relative rates at which different sections of our people reproduce themselves and the chances of the survival of their offspring, and thus will modify slowly but surely the average character of the nation. To take only one instance, if, by misdirected charity or unwise relaxation in the poor law, we make life too easy for the wastrel, the loafer or the unemployable, and at the same time do nothing to check his superabundant fertility, we may be sure that the qualities for which he is conspicuous will multiply rapidly in our midst. It will pay to be lazy, incompetent and unemployed. If, at the same time, we increase the burdens of taxation and administration on hard-working and industrious families near the margin of means natural to their class, whatever it be, we are

adjusting the environment unfavourably as regards industry, efficiency and hard work, and those qualities will be relatively less useful to their possessors. They will lose some or most of their selective value, and they will tend to be bred out of the race.

The great danger of democracy is that, more even than other forms of government, it may consider reforms too exclusively from the point of view of the immediate comfort of the individual, and may ignore their slow but irrevocable effect on the inborn character of future generations. All the more necessary is it that those who venture to assume the heavy responsibility of attempting to legislate for a democracy should understand the nature of the fundamental problems of race on which the future welfare of the nation depends. In the office of the Registrar-General, we have the foundation of an institution which should become gradually a depository of sociological knowledge, which would be at the disposal of the statesman who was willing to consider the ultimate racial good of the nation when framing legislation or drafting administrative orders.

CHAPTER IV

THE BIOLOGICAL INFLUENCE OF RELIGION

No chapter in the history of the religious experiences of mankind, when that book comes to be written, will be of greater importance than the one which deals with their biological significance and endeavours to assess the true selective value of the religious systems that have held sway in the imaginations of the human race.

However, the work is not yet written, nor is the material for it collected in any accessible form. But since the subject cannot be left out of our present survey, we are compelled to make some sort of effort —necessarily most halting and imperfect—to indicate the class of results that might be forthcoming from such an inquiry.

The essence of religion seems to be a recognition of the mystery that surrounds man's relationship to the Universe, an acceptance of the impossibility of obtaining a satisfactory explanation on any materialistic basis. The instinct of awe, which such an attitude involves, is the natural outcome of a sentient being surrounded by the forces of Nature, and so the religion of the homestead and the forest has always been of a simpler, stronger, more enduring character than any ritual of

the city state. No building, however majestical, no music, however soul-stirring, no ceremonial, however elaborate, although serving a similar purpose, has impressed the human mind with a sense of its subordination as do the rivers and mountains, the waterspouts and thunderbolts that surround the earlier populations. It seems part of the inevitable order that religions should be conceived and born in solitary places, and should droop and decay in crowded thoroughfares, where Nature is hard to seek and far to find, and a paternal government too often takes the responsibility for the relations between man and man and man and Nature out of the hands, often out of the cognizance, of the individual wayfarer.

Let us accept as our definition of religion "the effective desire to be in right relation to the Power manifesting itself in the Universe," and regard it from one side as an attempt to determine the true place on this earth of man the individual, and man the species. We find that in all stages of social evolution the interests of the individual tend to clash with those of the species. For the race it is necessary that selection should be rigorous and effective. Many must be called into life that few may be chosen as the parents of the next generation. For the individual, a stringent natural selection may mean disappointment, privation or death.

Hence comes the need of a supernatural sanction for unselfish conduct of no immediate advantage to the individual. No merely rational system of ethics has yet been found sufficient to influence the mass of mankind ; it is doubtful whether such a system ever will be sufficient even when all men realize the racial import-

ance of conditions which bear hardly on themselves. It needs the tremendous force of supernatural sanction, it needs the sharp antithesis between fleeting temporal advantage and eternal spiritual gain, to bring the individual to acquiesce in conditions which his reason tells him are opposed to his interests on this earth.

Anthropology shows us how in primitive peoples religious sanctions are invoked to enforce obedience to all the complicated laws and customs of savage life—laws and customs, often grotesque in themselves, yet, taken as a whole, necessary for social survival in the existing conditions of savage life. Down through the ages we see the promise of some ultimate religious reward or punishment invoked to send the warrior inspirited to battle, to bind the members of a tribe or nation into an effective whole, and to hold together the units of a family, while, at all events, the young need parental support for their proper development. Races which know how to use these means of strength have inevitably supplanted those without them ; thus the religious instinct, in helping those in whom it is hereditary, itself spreads through mankind.

There are various ways in which this influence makes itself felt. In certain civilizations, we have the frame of mind, or possibly the intuitive scientific insight, that seeks to sustain the family by the doctrine of the reincarnation of spirits or by emphasizing the continuity of ties with the departed ancestors, whose spirits will become angry or perish of neglect, should their stock fail. They believe that the departed will be keenly conscious of and will be able to assist in the efforts of their posterity. In the late Russian-Japanese war, one

read how the Japanese attributed their successes to the "spirits of their ancestors" and "the merits of their Emperor," the latter as an incarnation of the present racial aspirations.

Alone among the ancient religions, that of the Jews has survived in the Western world to the present time. Apart, therefore, from other considerations of its great interest and importance to us, we are led to inquire into the probable reasons of its remarkable persistence and vitality.

Now the Jews laid great stress on the continuity of the family. They gave the family a national and patriotic aspect. Moreover, there was always the hope for the Hebrew parent to become the progenitor of the promised child, the Messiah. The tendency to look back to a common ancestry in the great legendary forefathers, Abraham, Isaac, and Jacob, was accompanied by the effort to look forward and consider the interests of their children's children to the third and fourth generations. They set aside one tribe to supply the priesthood, they classified their men as keepers of flocks or tillers of the soil. Even when they became town-dwellers, such solemnities as the feast of tabernacles recalled their pastoral origin and emphasized the dependence of the city on the country, of man on Nature. They disliked the alien populations with whom they were surrounded and discouraged association and intermarriage with them. In the light of modern science there is reason to believe that this restriction embodies a very sound biological principle. In such points as these, the Jews appear to have had a very strong racial instinct, a profound sense of the importance of heredity.

It has been said that "an unmixed race of a first-rate organization are the aristocracy of Nature." Such a line of development has been attributed to the Jews through the "segregating genius of their great Law-giver," and the code attributed to him, embodying the national experience, seems to enshrine many profound biological truths.

The Hebrew nation were keenly conscious of an Eternal purpose working amid them, and they also realized the transient nature of each fleeting generation. Apparently without any definite belief in the immortality of the individual soul, they could look forward to and work for a national ideal which should be accomplished long after they themselves had been gathered to their forefathers. As befits dwellers in open spaces, they were originally a highly imaginative people, free from the necessity of embodying their religious conceptions in concrete form, a process which at once renders them liable to arrested growth and to petrifaction. There is probably some intimate connection between a camping pastoral life and a monotheistic form of religion, such as we find among the Jews and the Arabs ; it is clear that idols and fixed shrines would be singularly inconvenient things for a people who are engaged in a wandering tribal existence.

Even after the Jews became town-dwellers, their isolation from and inherited sense of antagonism to the surrounding peoples must have had a most beneficial effect in preserving the racial atmosphere and causing them to hand on unimpaired the national traditions.

Their history shows the survival value of a religion

which preserves in a series of ordinances the best results of racial experiences on matters of health and morality, and can endow them with the force of superhuman counsel. No one who is acquainted with Eastern life can read the passages dealing with the social organisation of the Israelites without being struck by the sanity of outlook, the minute attention to detail, the empirical knowledge of obscure facts, and above all, the insight into character—certainly into Jewish character—shown by the successive legislators who codified the customary observances of the nation.

A modern lawgiver too often rests content if his enactments are sound and plausible in themselves and have a superficial air of justice and beneficence. It would be fortunate for the nation he serves if he would take a lesson from his illustrious predecessors, study first the customs and characters of the persons for whom he is legislating, and note the after effect of his ordinances on the composition and destinies of the people before he sits down and writes that all is well.

There is another point in connection with the Jewish nation that at once strikes an outside observer. In their sacred books as in their national tradition, there is no reference to education apart from the implanting in successive generations of a sound knowledge of religious ideals and racial experiences. To the Jews as to the mediæval churchman, that alone was education. The technical training, be it in craftsmanship or in the literary arts, that merely enables a man to earn a living and exercise a trade, they were ready to receive from any race with whom they came in contact. It was not education in the sense that it would directly help

forward a man in his desire to understand and enter upon "right relations to the Power manifesting itself in the Universe." It is not education in the sense that it will assist a race in the formation of ideals and incline its members either to understand, or to obey without understanding, those customs and restrictions which are necessary for the wellbeing of the community to which they belong.

Cosmopolitan and most receptive in matters pertaining to training, the persistence of the unity of their religion and education is one of the striking features in the history of the Jewish people. No system less organically sound from the biological point of view could have made it possible for a nation, insignificant in numbers, bereft of a fixed habitation, to survive so many of its oppressors. Truly there is always a future for a nation that can adjust itself to the eternal purpose which governs the Universe.

Even the harshness of treatment so often meted out to the Jews, by ensuring the survival of the hardiest and most tenacious only, increased in the long run their chances of continued corporate existence. It will be very curious if the Jewish nation ceases to maintain its individuality in the face of an equality of treatment, such as it now receives in many countries—killed, in fact, by kindness—when centuries of oppression have failed to destroy it.

It is more difficult to analyse the causes of the failure of the Greek and Roman religions than to justify the success of that of the Jews, from whom we learn that a people need not survive politically in order to obtain

a great influence in the future. Indeed the persistence of Greek philosophy, as distinct from their official religion, is further evidence on this point.

Both in Greece and Rome, religion occupied a prominent place. It was recognized to be a necessary force to keep the State together, but the ceremonies of the State religion and their connection with the life and thought of the community were less convincingly related than was the case with the Jews. There was also far less appeal to personal experience and individual need, two of the most permanent elements in a religious system. The form of religion which depended largely on an instinct for personification, had been created by a people in contact with natural phenomena ; it was translated into a multitude of ceremonies which gradually lost their meaning, and indeed were inappropriate, to a city population, who, in their later stages, developed a strongly commercial bent.

If, as is now thought, in spite of apparent fusion, there were profound differences of race and consequently of traditional religion and morality among the inhabitants of the cities of Greece and Rome and the country districts surrounding them, it would account for the absence of any one accepted code of customary observance, such as was possessed by the Jews. Hence neither the current religion nor the prevalent system of morals carried sufficient conviction to preserve the nations through the time of their wealth and prosperity.

A fusion of races and religions, such as occurred during the extension of the Greek and Roman empires, leads, not to the strengthening, but to the actual destruction of the qualities that are most characteristic

of each of them. Later on, we shall point out that the intermingling of races is often a dangerous experiment involving biological effects which may ultimately destroy the community. The solvent effect on morals and religion of the contact of Western and Eastern civilizations in Egypt, India and Japan forms an interesting study in connection with this part of our subject.

Perhaps it would not be out of place to recall that many of the holy places of the Hellenic and Latin peoples, such as Delphi, Olympia, Nemi and countless others, long remained dissociated from the great centres of population. As a consequence we may surmise that pilgrimages for religious purposes to places associated with scenes of great natural beauty and wonder (as, for instance, nowadays to Lourdes, to Braga, or to St Winifred Holywell) have a psychological effect not unlike that which we try to obtain by our system of country holidays. Unfortunately the opportunity of developing the educational aspect for purposes of natural religion, is not consciously borne in mind and made use of either by the promoters or by the recipients.

We cannot yet make any just estimate of the influence of Christianity from the biological point of view. It is scarcely possible to separate the essential features of the religion from the excrescences with which the various nations and sects have associated it, in deference to their own needs and in conformity with their previous traditions. Owing to the spread of Christianity throughout neighbouring and antagonistic

nations, it has been difficult for it to become associated with any strong racial instinct. It has certainly acted frequently as a solvent force on conflicting ideals, but how far it has been successful in replacing what it has destroyed by a permanent and acceptable system of its own in many cases remains yet to be seen. Its very aspiration after universality has prevented the formulation of a code dealing with the minutiæ of custom and morality, which, if biologically sound, would undoubtedly possess great survival value. But a sociological system suited to one race or climate cannot effectively be applied to different circumstances. To take an instance : where Christianity has laid down the law on social observances, its insistence on monogamy is a definite stumbling-block to its spread among many communities whose social organisation requires a polygamous basis.

It is probable that Christianity suffered much in its second stages from the fact that it developed and crystallized out among towns of hybrid population, where its dogmas were subject to the influence of pre-existing sects and were laid down in accordance with views prevalent in the cities of the eastern Mediterranean. Thus it became associated with statements which were in no way inherent to it, and have always prevented the easy absorption of new knowledge. Time after time, a mass of experience and sound learning has accumulated outside the officially received body of orthodox tradition, and the ensuing uneasy process of digestion has resulted in a series of breaches, which have sapped the strength both of the defence and the attack. Thus we see the great difficulties that lie before a

religion which aspires to command universal acceptance or infallible knowledge.

It is largely on account of these difficulties and of the ill-feeling and want of comprehension engendered by them, that, in Christian countries, we have to watch a growing tendency to separate training as part of the process of upbringing from religious education, which is the true agent formative of character likely to have some biological significance. One has only to note the contents of the halfpenny papers and penny novelettes devoured as their principal intellectual food, by the majority of the population, to see how far a knowledge of reading may lead a man from that communion with the great minds of all times, the possibility of which was the original justification for a literary training.

Unless the upbringing of each generation be associated actively in some effective way with the prevalent religion and morality, it is difficult to see how either can have any real biological significance or true selective value. As we said before, at all stages of social evolution, the interests of the individual tend to clash with those of the race; and it is only a supernatural sanction for unselfish conduct, such as will not be obtained in any technical institute, that has been found strong enough to influence the mass of mankind against the pursuit of mere temporal advantage.

That the Christian religion in some of its manifestations has a definite survival value, we see from the maintenance of the birth-rate among the devout Roman Catholic peasantry of Brittany and the industrial Irish Catholic populations of our large towns. The fact too that the birth-rate has fallen less among the Protestant

clergy than among the laity by whom they are surrounded gives further evidence of the racial value of a strong religious instinct. It is greatly to be desired that the Protestant churches could find some effective way of preaching the dignity and sanctity of national ideals and of that family life and those domestic duties which their ministers have done so much to uphold.

If we are right in believing that the religious instinct is the only force strong enough to influence mankind, consciously or unconsciously, to consider the race as distinct from the individual, it is clear that the character of the national religion, the correctness of the biological principles its teaching embodies, the devotion, fidelity and number of its adherents, will be the real criterion of success or failure. The wave of materialism and unbelief which is said to spread over a nation at the time of its greatest prosperity, usually first affecting the families of the abler and more intelligent classes, and finding one form of expression in a diminished birth-rate, is at once a symptom and a cause of its subsequent decay. The intellectual qualities, the powers of initiative and organization, which enable a people to succeed, are segregated out under forms of religious belief and social organization which, disguise it as we may, encourage and acquiesce in the survival of the most efficient and energetic, allotting them the opportunities belonging to their superior racial value.

But a period seems to come in the religious development of nearly every civilized community when the moral conscience is awakened to its responsibility for the weaker and less competent stocks, who, inheritors of the racial faults and failings, are true scapegoats by

which the progress of the race is assured to others. If, however, the effect of this altruistic movement in directing the attention of society to the condition of the unsuccessful and unhealthy be to discourage and hamper the families of the able and robust, no further racial progress is possible, and degeneration will set in. The duty of self-elimination is not a doctrine that can be preached indifferently to all sections of a community.

There arises at times a certain type of religion consciously aspiring to influence and direct social effort towards the alleviation of social inequalities rather than ministering to each individual according to his needs. If such a religion has no mission of encouragement for the successful members of the community in all classes, and fixes its attention exclusively on the failures of humanity, devoting its strength to mitigating their lot so as to increase the probability of their racial survival, it is necessarily a source of weakness to the people who have adopted it. Moreover, it can never hope to maintain its hold on the able classes in whom the intellectual and administrative capacity of the nation is chiefly to be found, and by whom the nation is principally maintained and directed. Not only is its teaching clearly unsuited to their requirements, but its method of procedure is directly at variance with the continued successful existence of the people which permits the propaganda. Thus the wave of antagonism to this particular type of religious endeavour may be a sound biological reaction against an insidious form of threatened annihilation. At any rate the possibility of a connection between the two is worth investigating.

It is certain that very much might be learned from a careful study of religious tendencies and social conditions at various epochs in the history of past nations. The cause of the prevalence of different types of religious thought among different strata of the population, the reason of the persistence of one type rather than another, the relation between religious aspirations and economic conditions, the connection between want of belief and lack of appropriate teaching, all these points of view are deeply interesting, and have not yet been considered among the influences which are shaping society. We have only been able to indicate in a disjointed manner the direction in which enlightenment may be sought.

CHAPTER V

THE BIRTH-RATE

It is now clear that we must regard a nation or race subject to natural selection not as fixed and unchangeable in its hereditary qualities, but as subject to continual modification and adjustment. Its innate qualities are constantly altering and tending to fit themselves to the existing environment. It is constantly in a state of flux. By changes in the environment, we alter the goal at which natural selection is aiming, and thus alter the direction in which it moves.

But, broadly, certain qualities will, in any probable contingencies, always possess selective value, and tend to spread in the race. Strength of general constitution will tend to survival in almost all circumstances. Ability of mind must, one dare say, almost always be an advantage. It would be a poor-spirited race in which beauty of person and mind did not exercise a strong attraction in the choice of mates. As long as natural selection works unhampered, these qualities will tend to come to the front.

But all this assumes as a universal postulate that natural selection has full play ; that each section of the people reproduce themselves at a rate natural in their

circumstances. If this underlying assumption be not justified, if an artificial selection be introduced by a voluntary restriction of the birth-rate, and if this cause affect some sections of the race more than others, and not in proportion to the results of natural selection, our whole outlook is modified, and further consideration is necessary. A study of the birth-rate, then, is of fundamental importance in our inquiry, and must precede any further treatment of the subject.

Therefore it will be necessary once more to review in short abstract some results and reflexions which are set out in greater fulness in our book on *The Family and the Nation.*

If one element of the people reproduce itself faster than the rest, it will dominate the average character of the nation at an ever-increasing rate. A little calculation will make this plain. We shall see later that certain classes of the people now produce an average of only three children to the fertile marriage. In order that a population should maintain its numbers unaltered it is necessary that four children should be born to couples that have children at all. On the average of large numbers, two of the four will die early or have no offspring themselves, and the other two are left to replace the parents. Thus a nation, or section of a nation, that only produces three children to the fertile marriage has a birth-rate only three-quarters of that necessary to maintain its numbers unchanged. If the death-rate be taken at 15 in 1000 per annum, the birth-rate will be $\frac{3}{4} \times 15$, or about 11 ; that is, about 4 less than the 15 needed to replace the dead. At the end of a year the 1000 will have

become 996, while at the end of a century 687, and in two centuries 472, of their descendants will alone be left.

The birth-rate of other sections of our people is still about 33, or 13 more than their higher death-rate of about 20. In a year each 1000 will become 1013, in a century, 3600, and in two centuries, about 13,000.

The less prolific stock, if originally equal in number to the other, would be but one in six at the end of a hundred years, and in two hundred years it would be but one in thirty of the population. It would be lost in the descendants of the stocks of predominant fertility. Hence the importance of encouraging early marriages and large families in those sections of the people where the hereditary qualities are good. Early marriages tell in two ways. When the birth-rate is unrestricted, they mean large families ; and they shorten the interval between two generations, and thus lead once again to a more rapid growth of population.

Till about the year 1875 no artificial selection seems to have arisen. Heron has shown that in 1851 the rather higher age of marriage in the well-to-do parts of London as compared with the poorer parts was enough to explain the rather lower birth-rate. All sections of the community were reproducing themselves very nearly at their natural rates, save for the small disturbing factor due to the rather higher average age at marriage in the more wealthy classes. But since 1875 a serious change has arisen.

In 1876 the average birth-rate in Great Britain was some 36 per thousand of the population. From that time it has steadily diminished, and in 1910 sank to

25 per thousand. Clearly some new cause is here at work.

When we examine the question in detail, and investigate the decline in the birth-rate, not in the nation as a whole, but in selected classes, we arrive at even more striking results.

Mr Sidney Webb has dealt with the returns of certain of the Friendly Societies which provide "lying-in" benefits. In the "Hearts of Oak" Society, the claims to this benefit rose from 2176 in the year 1866 to 2472 in 1880 per 10,000 members. In the year 1904 they had fallen to 1165 per 10,000—a drop to less than half the number of claims made twenty-four years previously. This is a fall three times as great as the fall for the whole of England and Wales for the same period. A smaller Friendly Society gave a decline of 56 per cent. in the same time. Now the members of these Friendly Societies are a specially selected class. They are in receipt of good wages, and their membership of such a Society shows them to be thrifty and far-seeing. They are for the most part of the skilled artisan type and, to some extent, constitute an aristocracy of labour. The loss to the State of some thirty-eight thousand additional children, which would have been born to the members of these two Friendly Societies alone had their old rate of reproduction continued, cannot but be regarded as a serious matter. The hereditary qualities of these children might be expected to be good, and there was every prospect of their becoming useful citizens.

Another section of the community may be studied in the pages of *Who's Who*, an annual publication

which gives an account of everyone in the country who has attained a certain modest position of prominence. It may be taken as typical chiefly of the higher ranks of the professional and official classes. Among the details furnished the date of marriage and the number of children frequently occur. Thus it is possible to investigate the number of children born on the average to marriages which produce children at all at different periods.

Excluding for the moment clerical and military families, it was found for the remainder that 143 fertile marriages solemnized before 1870 gave a total of 743 children, an average of 5·2 to each marriage. For marriages entered on after 1870, the number was 1264 children to 410 couples, an average of 3·08. Since some of the marriages before 1870 were affected by the causes which came into operation about 1875, these numbers probably or certainly underestimate the difference in the average number of children. It should be noted too that the numbers refer to children alive at the date of entry, not to the total number of children born.

In the families of the clergy, we find that the corresponding average numbers are 4·99 and 4·2. Thus clerical families are less affected than others of their own social class.

On the other hand, the corresponding numbers for the children of those who have served in the regular army are 4·98 for the first period, and 2·07 for the second. While the average number of children in military families forty years ago was the same as the number in clerical, it has now sunk to less than half,

and there are signs of further decline. The prospect is not bright for an empire that depends so largely on military ability. The classes who have hitherto lived in the security and plenty won by the blood of those who have earned little gratitude in return, may even have to learn to fight themselves, if they wish their prosperity to continue. Whether they will show the necessary hereditary qualities of courage, self-sacrifice and military ability, remains to be seen.

A more complete study may be made of the stable landed class, to whose great services England has owed and still owes so much in unpaid and unselfish work for national and local administration. Taking any book of reference such as *Burke's Peerage*, and considering only those families which have held a hereditary title for at least three generations, we exclude the more modern middle-class commercial element in the present peerage, and get more homogeneous material. Marriages which took place during the ten years ending in 1840 gave an average of 7·1 births to each fertile couple. For the next ten years the average sank to 6·1, at which figure it remained constant till after 1860. From 1871 to 1880 the average was 4·36, while from 1881 to 1890 the corresponding number was 3·13. Here again we find a drop in the birth-rate of more than one-half in the last forty years. These numbers are all higher than those obtained from *Who's Who*, partly or wholly from the fact that nearly all births are recorded, instead of only those of children alive at the time of entry. But while the absolute numbers are higher, the relative decline is about the same.

In the course of the investigation, it became clear

that Roman Catholic families were less affected by this decline than others. A special inquiry showed that 30 marriages recorded in *Who's Who* and the *Landed Gentry*, between families known to be of the Roman Catholic faith, gave an average of 6·6 children to a marriage even in the period from 1871 to 1890. The significance of this result lies in the fact that the Roman Church is known to discountenance any artificial restriction in the number of children in a family. Together with the similar result for the children of the Protestant clergy, it shows that the decline in the birth-rate is not due to any lessened natural fertility, but is due to voluntary restriction. At all periods small families and childless couples occur from natural causes. It is the abnormal number of both which constitutes the new and sinister fact, and shows that a voluntary restriction of the birth-rate is going on.

We have now passed in review several representative samples of what may be described as the successful classes in all ranks of life. The thrifty skilled artisan, the prominent professional man, the landowner of good family, have all halved their output of children in the course of the last forty years. The few exceptions to the rule serve but to emphasize the lesson to be drawn, that the decline is voluntary; that the stocks we have passed in review are not increasing, or are even diminishing, in number because they do not wish to have the normal number of children, and know how to prevent it.

We must now turn to the other side of the picture. The decline we have traced in the successful classes is

much greater than that which has affected the population as a whole. We may conclude at once that certain other classes are still reproducing themselves, if not at their old rate, at a rate which has declined less. Since we have taken samples from all ranks of the foremost sections of the people, it will be probable that the natural rate of reproduction is more nearly maintained by the less successful strains in the population. We must not necessarily pass to the conclusion that all these other classes are of little comparative value. We require men of every sort of physical and mental ability to make up a nation, and no class of persons who are contributing to the general welfare can be put on one side as of little importance. Further consideration is necessary.

In examining the birth-rates for different parts of the country, we are met at once by the fact that the figures remain high in mining districts, and are specially low where the employment of women in factories is common. As a rule miners are a sturdy race of men, earning high wages, and contributing at least their full share to the wealth of the country. The controlling factor here seems to be the fact that women are not employed in mines, and there is no occupation for them outside the homes. Thus the economic motive is less adverse to many children than it is in those factory districts where a considerable part of the family earnings is contributed by the women.

But, when we pass on and examine other sources of population, we find less reassuring results. On the whole, the casual labourer is probably a less efficient man than the skilled artisan, and his higher relative

birth-rate is not altogether satisfactory. But there is undoubtedly much fine material among casual labourers, and a better organization of the labour market may de-casualize their labour, enabling them to acquire a more assured social status, and with it an increased economic and social value. The worst signs of the results of the selective birth-rate are to be seen elsewhere.

We have already said that the feeble-minded are prolific. This fact is well shown by some figures given by Dr Tredgold, who pointed out that, while the average number of children in the families that use the ordinary elementary schools is about four, the average number in those families which have one member at least in the special schools for the mentally defective is 7·3. Other evidence pointing in the same direction might be adduced, and it is certain that, in present conditions, the mentally defective families are reproducing themselves relatively faster than sounder stocks.

The general opinion, and even the views of economists, on the subject of population and the means of subsistence have varied greatly from time to time. In the stress of a great war, the cry is for more men ; and, during the Seven Years' War in particular, the small population of Britain as compared with that of France was recognized as a danger. Pitt, whose genius and courage saved England, wished ardently for more people, and reckoned rightly as a benefactor to his country the man who brought up well a large family. But in 1798 Malthus, misled by a partial knowledge of the economic problem, proclaimed that human

population always tended to outrun its means of subsistence, and could only be kept in check by famine, pestilence or war. Now, while it is true, as Malthus thought, that the produce of the earth, as won by savage man, increases slowly, the produce of civilized industry may grow much faster—faster indeed than the increase in the number of men. In modern industry a comparatively dense population is more efficient than one more scattered. There is less waste in communication, transport and the distribution of power. More improvements in industry are made, owing to the closer contact of mind with mind. Hence with two populations of the same quality, a dense one is more efficient than a more scattered one, and the means of subsistence grow faster, sometimes much faster, than the population. The population of England has increased largely in the last century, but the growth in wealth has much more than kept pace with it. By natural energy and ability, Englishmen have been able to develop the resources of the country, and so to organize industry that, besides supporting a much larger population, they have invested an enormous and constantly growing capital at home and abroad.

The real heart of the problem lies in the quality of the population. Were the whole population of England suddenly to become feeble-minded, or even were there a distinct drop in the average intelligence, the nation would cease to use effectively the present organization of industry, and would be unable to improve it to keep pace with "the times." The population would then be too great for the means of

subsistence, and would quickly be reduced, at the cost of fearful suffering, to the number which could live on the wreck of our civilization. If, on the other hand, the average strength and ability of the nation increased, the wealth of the country would grow far faster than the population, and, if properly distributed, would lighten the lot of all.

We are coming to understand that an able man creates wealth and supports others by making work for them. The essence of the matter was well put by William Farr, in the Census Report of 1851, though his views failed to obtain recognition :

"The character of every race of men is the real limit to its numbers in the world, if allowance be made for accidents of position and time.

"Population is often out of place where it is wanted, or could be most productive ; but the population of the world is not, as Malthus assumes, redundant ; and not only is there a paucity of men of transcendent genius in all countries, but few persons who have occasion to undertake, or who accomplish, great industrial, political, warlike, or other operations, ever find that the men of skill, industry, and entire trustworthiness—of whom they can dispose, either in the highest or the lowest departments—are superabundant. Every master knows that good men—and every man that good masters—are scarce.

"The idle who will not work, the unskilful who cannot work, and the criminal classes who cannot be trusted, are, however, it may be admitted, whether numerous or few, always redundant."

The years that have passed since these words were

written have served but to emphasize their wisdom. It is the quality of the population that matters. A hardy, efficient and energetic race will live and create surplus wealth in conditions where a less effective race would starve. A weak, ineffective and indolent people will make nothing of the most lavish natural resources.

It seems clear that a selective birth-rate is one of the most powerful agencies that can exist for modifying the character of a race. But until recently the possibility of variation had not occurred even to students of social development, and without thought it was assumed by historians, politicians and sociologists that whatever else changed, the inward constitution of a people remained unaltered throughout the centuries, so that the explanation of any rise or fall in achievement had been sought in external causes. In the light of modern knowledge, the one assured fact is the constant variation in the composition of a nation, and it is by a study of the birth-rates of the component parts that we get some clue to the progress of the internal movements. In matters affecting population, as with the weather, it should be possible for the Registrar-General to issue some sort of reasoned forecast, even to hoist a storm-warning. The quality and number of the births taking place in one year will not produce the full effect for another twenty or thirty, just as variations in barometric pressure take twenty or thirty hours to bring about the conditions they foretell. There is therefore plenty of time to study the gathering of the clouds and to prepare, if necessary, for the coming of the whirlwind.

What, it may be asked, do we mean by this idea of race? Why is it necessary to attach so much importance to the effects of a selective birth-rate?

It is essential to remember that, as an isolated individual, man cannot fulfil his highest destiny. It is as a portion of an organic whole, as the member of a specific race, that he is able to express himself most fully. All we can learn from the structure of society shows us that the relative position of each individual in regard to others is not arbitrary, but is probably determined by some factor depending on the values to be attached to character, power or intelligence. It is therefore of supreme importance to each individual that the composition of the people among whom his lot is cast should be ascending in the scale of values, lest he find himself bound up in a society of which the weight will surely drag him down. No man lives to himself alone; and it is this fact that justifies a nation in taking thought how to surround those who will shortly be called upon to express its aspirations and embody its traditions with the best possible conditions as regards companionship in the future.

A great deal has been written on the subject of race. A book recently translated from the German into English, *The Foundations of the Nineteenth Century*, has put a conception into the arena of thought, with which the sociologist will have to take account. The great things of the world are accomplished by individuals who have a strong personality, and by races which have a strong race-personality. Within a nation itself, the best work is done by groups or sections of the people that are easily recognized and have strongly

marked characteristics. We have shown reason to believe that this differentiation of type into so-called classes, which is found in all successful national evolution, is essential to the maintenance of progress. There is a personality of race, of type and of individual, separate from but interdependent on each other, and taken together constituting a foremost factor in racial evolution.

But, when we come to consider the birth-rate as at present affecting our social structure, we find that it is highest in those sections of the community which, like the feeble-minded and insane, are devoid of individual personality, or, like many of the unemployed and casual labourers, seem to be either without ideals or without any method of expressing them. In all the social groups which have hitherto been distinguished for coherence, for industry, for good mental and physical capacity, for power of organization and administration, the birth-rate has fallen below the figures necessary to maintain the national store of these qualities. Great men are scarce ; the group personality is becoming indistinct and the personality of the race, by which success was attained in the past, is therefore on the wane, while the forces of chaos are once more being manufactured in our midst, ready to break loose and destroy the civilization when the higher types are no longer sufficient in numbers and effectiveness to guide, control or subdue them.

It is a curious and suggestive coincidence, that while certain of the great nations of the world are losing their cohesion and individuality, and are deliberately attempting to eliminate the distinctive barriers of

occupation, type and social status, there is nevertheless a pronounced movement in the opposite direction. The smaller nationalities are disentangling themselves, and rightly or wrongly, wisely or unwisely, are endeavouring to recreate their own peculiar social atmosphere. From Austria, eastwards and southwards, a host of small countries are expressing their national ambitions in different ways. Norway and Sweden have agreed amicably to develop on divergent lines. Finland and Poland show no desire to forget or forgive their oppressed and submerged condition. Even Iceland looks askance at her predominant partner, Denmark; while nearer at home we hear cries of "Wales for the Welsh," and discover to our surprise and dismay that the Irish nation is willing, even painfully, to recapture its own discarded language, if by so doing it can emphasize the distinctions of race and creed. On all sides of us, those who have eyes to see can witness the reconstruction of racial personality, and can speculate in which direction the process of evolution will ultimately be the most successful.

CHAPTER VI

THE POSITION OF WOMEN—A SURVEY

The position of women is a very sure index of the inward prosperity and outward organization of the community to which they belong. To read the signs aright would probably give a clearer insight into the destinies of a nation than many years spent in the study of blue-books and Foreign Office despatches. For while the work of men is almost invariably directed to the improvement or maintenance of the conditions of present-day environment, the natural duties of woman infallibly lead her to look into and provide for the future of the nation. Many a man may hope to see the result of his daily labours in the course of a few months or of a few years : much of the best work done by women in giving birth to and bringing up children will not bear fruit until thirty, forty or fifty years have elapsed, and the effects of a well-spent life may be most striking many years after the owner thereof has passed unmarked to her rest. It is possible for a man to receive from his fellows a just recognition of his efforts on their behalf. A woman's work can rarely be appreciated fully during her lifetime. Social conventions have unconsciously recognized this funda-

mental difference between the natural outlook of the two sexes. Honours and distinctions are abundantly provided by which services of varying value and importance rendered by men can be recognized and rewarded. There is little such provision for women ; and, when we hear of their bestowal, the announcement frequently rings false even in the ears of the unthinking. Instinctively, every right-minded person knows that the one essential service a woman renders to the State can neither be judged accurately nor rewarded adequately.

If we set ourselves to examine the causes which influence the position of women in a society, we find that they fall into two groups. The first may be classified as a biological and numerical factor, and the information to be gained from a study of the influences involved is still very slight and obscure. Nor are we on much surer ground in our second division, in which we set out to determine the influence of occupation—of the national or local industries—on the status of women.

Yet since the chief burden of maintaining a sound hereditary stock of the national assets of good health, good ability and good character falls on the women, any study of heredity and society will fail infallibly of its purpose unless it take account of the number and character of the women employed at any time in this most fundamental of all occupations, and note the tendencies to diminish or to increase the quality and quantity of the workers therein.

As regards the numerical factor—the actual proportion of men and women born in the world—there

are at present two slight indications of the existence of some biological adjusting factor in determining the numerical proportions of the sexes in a community where the birth-rate is not affected by artificial restriction. In the first place, there is evidence to show that the proportion of females born is somewhat increased during years of plenty or among people and classes who are habitually in possession of sufficient supplies of food. In the second place, it appears that there is a tendency for females to be born in the earlier years of married life and for males to appear in the later periods.

If we accept the probability of the existence of these two factors, which are said to have been observed in a more marked form in primitive communities, it follows that a nation may look to have a somewhat larger number of women than men in its upper and more prosperous classes. Whether, as has been suggested, this superfluity of women indicates the possibility of the population overtaking the supplies by means of some form of polygamy—such as is practised in simpler forms of social organization—it is not pertinent to inquire, since we are dealing with civilization of a different type. The second tendency—for the female births to precede the male births,—in these days of limited families, will also work in a similar direction, and again tend to upset the numerical balance between the two sexes. Adding to these two indications the fact that the elder children of a family are somewhat more liable to inherit the racial weakness—a tendency to crime, tubercular disease or feeble-mindedness—than the younger children, we have indications that our

present ideals with regard to the position and duties of women in particular and of the married state in general are not wholly in accord with a sound and even biological development of the race.

The mere fact of the existence of some biological adjusting factor is of very great interest, since at once we are compelled to consider how far modern social conditions are opposing or are availing themselves of what is probably some fundamental factor in the well-being of a race. Thus, if it be proved that families limited to two or three children are inevitably slightly below the average quality to be expected from the parents, and lead to a superfluity of females, and that a superfluity of females produces an unstable and unsatisfactory element in the national life, it is mere folly to bewail the effect in the aggregate and to contribute to the cause in particular. If an excess of women means a greater opportunity of selecting those of the ablest and most desirable type to be mothers of the future generation, while those who inherit the racial weaknesses find openings in other less exacting occupations, the numerical excess would give a great advantage in offering opportunities for natural selection to work upon, as far as the female element was concerned. But, if the superfluity of women leads society to rely increasingly on the services of the most competent to perform duties and undertake responsibilities usually allotted to men, and even to displace men in work they are better fitted to undertake, and furthermore encourages the majority of women to be trained in a method adverse to the prosecution of their natural occupation, so that the less able alone are found will-

ing to carry on the race—an excess of women must be regarded as a symptom of coming decadence.

The second factor we have alluded to in determining the status of women is also extremely difficult of analysis. The influence of occupation on race, which often resolves itself into a question of geographical distribution, has not yet been investigated either by our sociologists or our economists. To students of anthropology alone, the subject is known to be of great importance.

It is not easy to give examples in the space of a few pages, which is all we can devote to the subject. Thus, a seafaring life for men—either in voyages of discovery or long absences connected with the fishing industry —leaves the women entirely to themselves for long periods. The management of the home and homestead falls inevitably into their hands—and the necessity for qualities such as self-reliance and independence in the occupation pursued by the men is equally great in the case of the women. Whenever the local industry brings about the absence of the men throughout long periods, we may look to find the women in a position of influence and responsibility. There too we notice the frequent development of the finer feminine crafts, such as lace-making and embroidery, which have flourished among the women of Venice, Genoa, Flanders, Devon and the Baltic. Our Norse and Danish ancestors bequeathed to us a tradition of the above type.

Quite other, for instance, are the conditions among a settled mining population ; the perpetual presence of the

men in the homes does not leave the women scope for independent action, while the brute force required in the prosecution of the normal local occupation, the arduous and exacting conditions of the employment, often cutting off its followers from the influences of nature and human society in their more delicate forms, are unsuited to female labour, and do not lead to the development of any by-products of human skill and ingenuity. No one, even now, tries to start lace-making classes among the wives and daughters of colliers. A mining district or a congeries of foundries and smelting works usually gives us a strong, somewhat turbulent population, a high birth-rate—since there is nothing to occupy the women outside the homes,—a high death-rate, and a want of what—for lack of a better term—we may call the refinement of manner and outlook, the natural inbred courtesy and philosophy, the deep religious instinct that are so often associated with a sea-coast population or one settled on the land.

A purely agricultural life, carried on in regions such as those of Eastern Europe and Western Asia, in conditions of great hardship and constant insecurity, seems to lead to a marked degradation of type. The women especially are often little better than beasts of burden, and all social conditions tend to depress humanity both through the influence of environment and heredity. Petty warfare leads to the perpetual extermination of the more hardy and independent men ; crushing physical labour debases the vitality of the women and children. The introduction of a considerable pastoral element relieves the situation, for the women are at once employed in the lighter occupations of spinning and

weaving, milking and butter-making, while the labour they were previously driven to perform is undertaken by four-footed beasts of burden. A farming population not too widely dispersed, where crops and stock are intermingled, probably affords one of the best grounds for raising a healthy population.

An unregulated industrial life, such as was to be found in England from the rise of industrialism to the passing of the Factory Acts, seems to vie with an agricultural community of a low type in depressing the prospects of humanity. Too often, mere numbers are all that is required; there is neither time nor opportunity in which to develop the finer qualities of body and mind. The women are absorbed into the factories as readily as, or more readily than, the men, since their labour is cheaper. The birth-rate is low, the death-rate is high; the race is obviously on a downward grade both as regards physique and mental calibre.

The type of society which has evolved the speculator, the financier, or indulges in the pursuits of ill-regulated gold-mining and all forms of economic gambling, has always proved highly unsatisfactory. There is no more demoralising element in any station of human life than perpetual uncertainty as to the means of subsistence, with alternate periods of poverty and wealth. Great luxury vies with depths of misery, till both become familiar objects. The sense of responsibility is naturally little developed. The women, who have no economic *raison d'être* in such a community, are the objects of irresponsible indulgence, one of the means by which the men make visible the

success or failure of their courses. No good has ever come of any society founded on such a basis.

The ordinary life of commerce, with its basis of a seafaring and agricultural population, where the occupations outside the homes are in the hands of the men, has usually led to a satisfactory type of social development. The women have found occupation and independent interests in domestic duties, and sufficient leisure and strength have remained to allow for the development of arts and crafts. It is in such communities, intermingled with the full life of the countryside—the two being mutually interdependent,—that civilization has reached its highest developments of literature, art, and science. The Greek and Italian cities were all originally settlements of this kind.

Such, then, is a brief survey of the effect of occupation on the organization of societies of a simple nature, and many of the special characteristics remain among sections of the population even when the various types are blended to form one of our complex modern states.

Let us now examine our subject from the historic point of view, and see if we can assign any part in the making and unmaking of nations to an adjustment of the position of women, on whom, as we have already said, falls the chief burden of regulating the destinies of a nation. Clearly no community that uses its women as beasts of burden, either in the fields or the factories, has reached or can ever hope to reach to any satisfactory standard of development. History gives us no instance of any country that has devoured its

inheritance in this respect and has advanced to a high civilization under the process.

But the failure of such civilized states as Athens and Rome, Spain and Venice, to withstand the insidious process of racial decay is more difficult to account for. One point in common that preceded the fall of these civilizations was the decline in the sanctity of family life and the restriction of the birth-rate among the able and more competent classes, who were the trustees of the most valuable racial qualities.

As long as Rome remained under the control of a definite homogeneous race, the family was treated as the social unit, and patriotism and self-sacrifice, based on devotion to the family and the home, burned with a steady flame—a model to all time. But Rome became a cosmopolitan capital, drawing in from all nations men who demanded the privileges of citizenship without being able to bear its burdens or willing to submit to its limitations. Eventually the purity of the race was lost, and with it vanished the definite character of the people and the social structure of the nation.

Both in Athens and in Rome, during the period of splendour which ushered in their decay, the dearth of children in the patrician and upper classes, and others who successively came to the front to fill the empty places, was regarded with alarm by the responsible statesmen of the day, and the tendency for the best women to remain if not unmarried at least childless, or to find occupation and interest in the political and literary spheres of life, was recognized to be a source of national danger.

In Imperial Rome, laws were passed giving special privileges to patrician fathers of more than three children, and it is a pathetic comment on the futility of such enactments that we find the younger Pliny, childless after two marriages, congratulating himself on receiving these privileges, as a mark of the Emperor's good-will. At one time the mothers of several children were to be allowed control of some part of their dowry—at which the fathers became recalcitrant; young patrician widows were to be compelled to remarry within a limited space of time; again, bachelors above a certain age were forbidden entrance to the public games—a restriction which, until removed, led to the contraction of a number of formal marriages with women of the courtesan class, but to no increase in the birth-rate. At another time, public complaint was made of the scarcity of children among the families of the knights, the military class of the Roman Empire, who retaliated by pointing out that during their prolonged absences on foreign service, the privileges accorded to their families had been abrogated and their patrimony had been taxed to such an extent that they were no longer able to maintain even their one or two children in circumstances suitable to their social standing. The symptoms connected with the decline of the birth-rate were freely discussed and deplored; the causes of the decline were never examined into, with a view to reconstituting the environment of seclusion, security and comfort—possibly of privilege—in which the elements recognized to be of the greatest value to the State could be persuaded to breed freely. To re-establish a distinct race and a natural

aristocracy on the basis of the segregation of ability and character into stable classes possessing definite privileges and responsibilities was certainly as much outside the intention of the Roman democratic legislator as it was probably beyond his power. The long centuries of barbarism and the squalor and turmoil of the Dark Ages were part of the price which humanity had to pay for a notable failure to solve the problem.

Sparta also has an instructive tale to tell, a variant on the problem as it appeared in Imperial Rome ; but in many ways a smaller state gives a more satisfactory example to those who are impatient to connect cause and effect. The Lacedæmonian republic was a primitively organized state, of matriarchal form, even at a late period, in which property descended through the women. Consequently it was easier for the female element to obtain control than it was in Rome, where the power of the father was supreme. In the prime of her national life, the constant absence of large bodies of fighting men left the government of Sparta largely in the ineffective hands of old men and boys. So at a certain period of her history, the women, being probably greatly in numerical excess, secured the right to assist at the public meals, which was equivalent to a participation on equal terms in the political life of the country. There is no complaint as to their methods of administration ; no doubt they were most efficient and self-sacrificing governors. But the net result seems to have been that the cradles were left empty and the firesides were deserted, until in a hundred years the Spartan nation had virtually ceased to exist,

and its admirable qualities of vigour and simplicity, which under other auspices might have regenerated the Hellenic world, had been wiped out. Such was the result of a determined effort to improve environment at the cost of sacrificing the heredity of the future generations.

Venice provides us with another solution of the problem, equally unsatisfactory to all concerned. The whole story is contained in a few sentences in the *Cambridge Modern History*:[1]

"Yet much private wealth remained in Venice, and no signs of exhaustion or poverty appeared in its life of luxury and display, its feasts and carnivals, its theatres, concerts and balls. . . . Still, strangers from every part flocked to share the gaieties of Venice, its life of amenity and licence, where everyone might enjoy himself to the utmost, sure of excellent police and sanitation. . . . Interbreeding, limitation of families, strict entails, and the custom of younger sons taking Orders, had so diminished the nobility, that during this century the members of the Grand Council decreased from fourteen to seven hundred. An attempt to infuse new blood by ennobling good provincial families failed, since few would pay the sum demanded for the honour. . . . All through the century the physical and the political and moral decadence of Venice continued; yet the changes which accompanied her decay were so gradual that they can only be estimated by their ultimate results. Venice really existed on her past reputation and on the mutual jealousies which withheld her powerful neighbours

[1] Vol. vi., *The Eighteenth Century*, pp. 606–7.

from attacking her ; but the whole artificial fabric of her structure, since it had no innate strength to support it from within, collapsed before the first sharp blow from without."

The passage is most instructive. Woe betide a people that pins its faith in social regeneration solely to a policy of excellent police and admirable sanitation.

There is another point which may be gleaned from a study of the Roman and Venetian empires during their time of expansion, a point which is not without its application in any criticism of the constitution of society at the present time.

A period of great material prosperity seems inevitably to lead to an extension of the social element thriving on the opportunities afforded for rapid gain and irresponsible wealth. This of itself is an unmixed evil, especially in its secondary effect of setting a bad example and putting a false standard before the nation. From the point of view of heredity, it can at first do little ; but its most insidious effect must be sought in the undermining of sound customs and frugal habits among the natural aristocracy of a land, with whom their ill-gotten gains too often enable the speculative element to purchase the right of association. The distrust of the *nouveau riche*, of the unproved family of mushroom growth, is probably a sound racial instinct; and there is more to be said in support of the deep-rooted prejudice which exists in certain circles against the parvenu than has ever come to the ears of the egalitarian philosophers.

It is essential to remember that we, in England,

have another special point in common with the great empires, such as Rome and Spain, which have passed away. There is a constant drain of men of high spirit, good character, and administrative ability to the outlying provinces of the Empire. In England, this drain has been going on for nearly two hundred years. Too often these men are not permanent settlers or colonists in the distant countries, but are deputed to spend the best years of their lives in what are frequently unhealthy tropical dependencies, where white life is often cut off prematurely. There are many difficulties in the way of taking out a wife and rearing a family in suitable conditions. Again, in other colonies—South Africa for instance—the presence of a large semi-barbarian native population and the sparse European settlement create conditions of some danger and considerable hardship and anxiety for the English settlers. Many parents are willing that their sons should face privations which are deemed impossible for women of equal social standing. Hence we lose, year by year, to our colonies and tropical dependencies, as Rome and Spain did before us, an appreciable fraction of our most valuable young men. Hence we are left, year by year, from another source besides the two we have enumerated, with an increasing number of superfluous women, who are debarred by the logic of mere force of numbers from taking up their natural avocation.

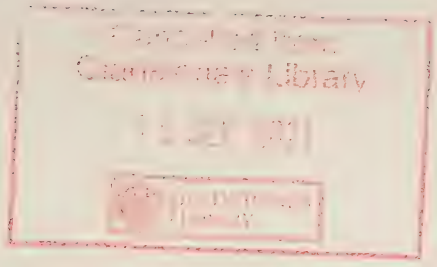
Nor does the evil end at home. The direct outcome of our scruples is seen in the large half-caste populations, that exist in many of our dependencies, and form the chief part of the inhabitants of some of the South American republics, the least satisfactory of

modern states. The conventions of a social class that will not expose its daughters to hardship, cheerfully acquiesce in conditions that condemn white men either to enforced celibacy, to marriage with women of a lower social standing or to association with native women. Meanwhile from many of the women who have remained at home in circumstances of ease and security we hear preached the comforting doctrine of the equality of the sexes.

The problem of the half-caste population may yet become the most serious obstacle to progress that humanity has to face. Both in India and in the United States of America, it is growing within measurable distance of being an urgent political question. In matters of religion, of education, of social standing, of intermarriage affecting them, we have to take action in the dark ; not knowing what conditions are appropriate for the best development of an organism to which probably neither of the parental environments are applicable. All the knowledge we possess, all our innermost instincts and prejudices, counsel us against the creation of the half-breed and the mongrel, and yet many of our present social conventions lead inevitably to the increase of the type whose existence we deplore.

It matters nothing in the end, when the men of an imperial and colonizing nation go out into strange lands and are unaccompanied by their women-folk, whether, as in Spain, the women stay behind and go into convents, or whether, as in England, they remain at home to swell the ranks of the celibate teachers, inspectors, and agitators. The result, as far as the

destinies of the old or the new nations are concerned, is identical. The sociologist of the future will have to consider the position of the superfluous woman in the mother country and the proper treatment of the colonial half-breeds across the seas as part and parcel of the same problem.



CHAPTER VII

THE PRESENT POSITION OF WOMEN

In our last chapter we passed in brief survey through some of the principal causes—biological and social—which affect the position of women in a civilized community. The extreme complication of the influences at work is perhaps the most noteworthy feature, while, from the historic point of view, the recrudescence of the problems, the recurrence of the critical periods at widely separated ages and under varying conditions, form a subject well worthy of careful study and investigation.

It seems clear that a slight natural excess of women will be a feature of almost any civilized community, but that the present greater excess is largely due to artificial causes, partly connected with the restriction of the birth-rate, partly with the drain of men to foreign or colonial lands. The importance of this fact deserves attention. The practical question before us is how this surplus female population can be best trained and utilized without injury to the future prospects of the race. The danger of the position seems always to lie in the fact that it is the anomalies of life, the individuals who are out of place, which attract attention rather than

the persons and things who are fulfilling their natural functions. Not only where women are concerned, but in many other cases, we may see the tendency to consider and legislate for the exception develop and grow until to many people the interests, nay even the existence, of the normal type are almost forgotten, and are certainly overshadowed by the scrupulous care with which any abnormality is given more than its due share of public attention.

Therefore, in calling attention to problems which originate in the excess female population, it must be remembered throughout that we are dealing with questions which only affect a numerically small proportion of the sex, and might be ignored, were it not for the fact that human nature is ever prone to regard the exception as though it were the principal object requiring solicitude and favourable treatment.

Let us first consider how present social conditions are affecting the prospects of the married woman, the normal type of adult womanhood.

Now here it is clear that the prevailing fashion of small families, of the only child, or the son and daughter —long the desiderata of the typical French parents—is producing a marked effect on our social customs. Apart from the fact that four children to each fertile marriage is the least that will maintain the number and quality of the race unaltered, a woman who has given birth to only two children is very obviously a person of insufficient occupation, who has not fulfilled her legitimate functions. These two children may be educated in our public elementary schools, or may be consigned to the care

of schoolmasters and governesses; in either case it is sufficiently plain that the mother has usually become one of the unemployed and unremunerative members of society. Whether she salves her conscience by taking up politics and philanthropy or is driven by economic pressure into some industrial occupation, whether she deadens her natural instincts on the racecourse, at the bridge table or on the golf links, the fact remains that her capacity for engaging in other occupations depends on the thoroughness with which she has neglected her natural avocation. The normal woman who, between the ages of twenty and forty-five, regulates well her household, gives birth and nourishment to a large family of children, superintends their education, health and upbringing, has little time or inclination for outside distractions. She requires all the help and strength that emanate from a quiet home life and undisturbed surroundings to enable her to accomplish her task satisfactorily, and it is a suicidal policy from the wider point of view to endeavour to thrust further responsibilities upon her.

There is another way in which our customs are affecting the position of the married woman. To anyone advancing into middle age, who has been conversant with each generation of young people during the past ten, twenty or thirty years, there is an extraordinary alteration in the outlook, in the intuitive knowledge with which the majority of young women of the upper and professional classes can look forward to-day to the duties and responsibilities of married life.

Among the priceless advantages of the normal family is the fact that each home of this type supplies

a continuity of tradition on all household problems. Whether the elder members of such a family imbibe the necessary knowledge from watching and early taking a share in the general management, and the supervision of the younger members, or whether the younger members, as they grow up, are found useful occupation in the new homes of their elder brothers and sisters, which are beginning to take shape around them, we have a type of family life in which domestic interests and all questions involving the welfare of the future generations are never lost to sight. We have, in fact, not the artificial conditions of the laboratory of domestic science with which we are laboriously trying to replace lost opportunities, but the natural living, growing workshop in which every woman learns by precept, experience and practice a knowledge of the duties which in all natural societies would fall to her share in after-life.

Thirty years ago, the large majority of women could enter upon their married life with the confidence of experience, gained as part of the usual equipment of their normal home surroundings. To-day, it is lamentably, almost ludicrously, frequent to find girls of twenty-one who have never washed an infant, cut out a night-gown or passed disturbed nights with a teething youngster. There is a natural reluctance to perform duties with which we are unfamiliar ; and the feeling of dislike, the sense of almost impotent despair with which many of them regard the possibility of having to undertake such offices, is a speaking comment on our present system of higher education for women. *Experientia docet.* There is more of applied science and

human nature to be learned from having assisted in the nursing of children suffering from a long series of infantile diseases and ailments than can be extracted from all the volumes of the *Encyclopædia Britannica*. But no doubt these subjects will be dealt with more fully in any ensuing edition. Thus does one generation wilfully neglect the education and upbringing of the next !

There is unfortunately, owing to economic causes, a large section of our industrial population in which the married women are forced to become wage-earners. This is a state of affairs which should never be regarded with equanimity in a civilized community ; it is difficult to find any compensating advantages in a social condition which creates such dire consequences from the point of view of the race.

As soon as the married woman becomes a wage-earner, the birth-rate drops disastrously or the infant mortality runs up. Milk depots for babies deprived of their natural nourishment are started, crêches where the hapless children can be deposited for the day are subsidized by philanthropic persons, the infant classes of the schools are crowded with tiny mites who are deprived of their parents' care for the best part of their waking hours. While the mothers are working in the factories in order to earn what are often insufficient wages, regiments of officials and other devoted persons are paid voluntarily or perforce by the community to render all sorts of services to the unfortunate offspring, thus bereft of their natural protector. The wages earned by the parent probably

hardly suffice to pay her share of the salaries of her substitutes. Looked at in the light of reason, the situation would be ludicrous were it not so melancholy.

We are inclined to classify for biological purposes, as we have done elsewhere, women and men as respectively the capital and income of the State, the one to provide for the future and the other to maintain and uphold the affairs of the present. Tacitly the national system of economy has always accepted the existence of a vital difference in the functions of men and women as the basis of its scale of payment of their services. Normally, a man's wages are calculated to represent, not only his own keep, but also a sum sufficient to maintain a wife and family. This means that it is recognized that a man can perform two duties to the State. He can do his day's work and be the father of a family. A woman's wage represents her keep only, or sometimes merely pocket-money, while she remains under her parents' roof, for she can only undertake one of the two essential functions of an adult person ; she can either earn her living, or give birth to and bring up an adequate number of children, in which case her payment is included in the father's wage. When, in industrial communities, we find that a large proportion of married women are forced into remunerative employment, to the detriment of the number and health of their children, the result virtually is that, while the women attempt to perform two duties which are mutually inconsistent, the husbands cease to undertake their full responsibilities ; for too often they are no longer to be counted as fathers of families.

The same effect of the disregard of natural limita-

tions may be traced in the higher phases of employment, where, from the point of view of the inheritance of desirable mental and moral qualities, the results, though on a smaller scale, are quite as disastrous.

In France, as in England, there has been an increasing tendency of late years to employ women in various functions of the State, especially in affairs pertaining to education. There has also been a considerable reaction against the limitation of opportunities which was enforced in the celibate teaching orders. It has been made possible for the women teachers to marry, and they are granted brief absences from duty during the periods of childbirth—without forfeiture of salary—a step which is being followed in England, by some of the more progressive education authorities. But what is the consequence of this step, undertaken largely with a view of counterbalancing the arrest in reproduction of the abler classes, engaged in these important duties ? As far as we can learn, marriages among the women teachers do occur, to a slightly increased extent, since their earnings facilitate the creation of new homes. Births also occur, but to an extent which is far below even the low average of the social stratum to which these persons belong. If the men who have married these teachers had instead become the husbands of women without fixed outside occupation, we cannot doubt that the birth-rate would have been considerably in excess of the numbers actually recorded. Once again, in the conditions we have created, it is the men who are induced to fail in the fulfilment of their legitimate functions.

Thus the effect of encouraging the marriage of these women has probably been a distinct reduction in the

number of children produced in the class to which they belong ; and we cannot doubt that the result which has been noticed in France will occur in any other community which bases its efficiency on the possibility of obtaining a large supply of female labour.

Apparently, for a time, we can shift a great part of the industrial and administrative burdens of the country on to women, who can undersell their husbands and brothers. We probably effect thereby a real improvement of environment, since a woman of better training and aptitudes can always—for reasons we have given above—be secured at a lower rate of pay. But we are consuming our one essential form of life-capital, female humanity ; and for us, as for all nations, the process must end in disaster.

It is in France, where in certain years the number of deaths has equalled the births, that the most systematic attempts of the modern world are being made to counteract the biological effect of modern tendencies. A few of the enactments may be here quoted. Throughout the whole country, absence from work on the part of a woman for eight weeks consecutively before and after childbirth does not allow her employer to break his contract with her for her services, except under payment of damages with interest, and no private agreement to the contrary will be upheld in law. Absence for two months with full salary is allowed by the State to school-mistresses, half to be taken before and half after the birth of a child. The Crédit Lyonnais, a great banking concern, and the Grands Magasins du Louvre allow respectively thirty days' and

six weeks' absence on full pay to their female employees, in the event of childbirth.

On the general problem of encouraging the production of children, the State allots £20,000 annually to maternity assistance. The Ministry of Labour provides a marriage gift of 100 francs (£4) for each workman in its service, and an additional 100 francs for the birth of each child. The Ministry of War gives premiums to mothers in its employ suckling their own children. The City of Paris and the Département du Seine bestow an additional 50 francs a year (£2) on all employees not receiving more than £16 a year who are fathers of at least four children, for each child in excess of that number; whereas the Crédit Lyonnais, besides the maternal leave of absence already mentioned, give an increase of salary equivalent to about 10 francs a month (8s.) to each of their workmen, on the birth of every succeeding child after the first.

The Municipal Council of Paris, when reorganizing the relief of the poor, laid down the following guiding principles. "What is needed is in the first instance to assist mothers, young children and adults who may be rescued from disease, and especially large families. The insane and old people, who are the *caput mortuum* (lit. 'death's head') of Society, are a secondary consideration. A nation's first duty is to protect the productive element of the population."

It is interesting to compare these modern enactments of republican France, some of them directed towards the encouragement of the more necessitous classes, with the legislation of similar character, already detailed in

brief, which was designed to coerce in fecundity the classes believed to be of the greatest value to the State, inaugurated by the Roman Empire. The divergent methods are at least as instructive as the opposition of the aims, and much might be written about both. It is too early yet to say whether the modern legislation will fail of its purpose as completely as did that of Imperial Rome. During the first half of 1911, in spite of this legislation, the deaths in France were some eighteen thousand in excess of the births; whereas, twelve months previously, the numerical positions were reversed, the births being then about twenty thousand in excess of the deaths. This is not an encouraging beginning. Like their illustrious forebears, the French are making no attempt so far to grapple with the industrial, economic, and moral causes which lie at the root of the evil; they are content to palliate the effects only. But the result of their legislation should be watched carefully, for it is certain that, as need arises, other nations will desire to follow in their footsteps.

We have now to consider the position of women as it is affected by the existence of two classes of persons, both of whom, though of frequent occurrence in our midst, nevertheless constitute an abnormal type. There will always be a certain number of married women who are unfortunately childless, or whose families will be limited naturally to one or two offspring; and we must also look to have with us a proportion of women, who from force of circumstances will remain unmarried, unless they are prepared—like labour which is out of place in one district—to migrate to the colonies and other regions where their services are in

urgent request. We might almost paraphrase the sentences of Farr, written on the subject of population in the Census Report of 1851, and say of the great majority of unmarried women that, though they are often out of place where they are not wanted or cannot be productive, they are not therefore, as many people assume, redundant. A wise scheme of redistribution is their most urgent need.

But this particular and most pressing scheme of redistribution is not yet with us, and meanwhile we find ourselves with a considerable number of women who are genuinely unoccupied, and forced to find occupations in which they can earn a living. The majority of these women belong to what we may term the upper and professional classes, precisely those sections of the nation whose sons are employed most freely for the administrative work of the Empire in the dominions beyond the seas, and have formed a large proportion of the most successful colonists. Except for women employed in domestic service, it is rare to find an unmarried woman of the industrial and labouring classes. Unfortunately, in the professional classes, it is the ablest women who are the most efficient wage-earners, either in conjunction or in actual competition with men, and are the first to be withdrawn from their normal sphere of action as wives and mothers. Then, as the process continues, there arises a strong pressure to make the training of all women subservient to the ultimate necessity of the few : to consider the possible interests of any single one, as an individual, who may have to become a wage-earner, rather than the certain advantage of the majority, who should be encouraged

to enter upon the normal sphere of wifehood and motherhood. Thus we see a wrong ideal of the true vocation of women set before the rising generation, and a vicious circle of misdirected training enthroned in our midst.

But, at present, it seems likely that a good deal of the unemployment of women is due precisely to this error in training. The problem is probably somewhat analogous to the general problems of unemployment. At one end of the scale there is a certain and increasing percentage of real unemployables, whose growth is due largely to unsound philanthropic enterprise and ineffective natural selection. We do not, be it remembered, absorb the feeble-minded and incompetent into industrial and educational occupations where celibacy is a *sine qua non*. We leave them to propagate their species at will, providing maternity wards and skilled attendance for the purpose. At the other end of our social scale we have a want of mobility and a wrongly directed training, or absence of training, which has rendered many competent women unfit and consequently unwilling to take up life and work on the ordinary domestic lines; there is apparently no limit to the number of suitable women who could be profitably absorbed in several of our colonies. Unfortunately, the employment of women in the various offices which are created to ensure an improvement of environment amongst us is often directly beneficial to the community at the moment. Since a woman has usually only herself to maintain, an individual of higher education and character can be secured at a lower rate of pay than a man of corresponding ability and training. If we raise the wages, the unmarried or childless woman will always

have the advantage of additional comfort and luxury or freedom, which will probably have the ill effect of disinclining her yet further from the more arduous, more exacting duties of marriage and child-bearing. Moreover, there is little doubt that the present generation often benefits directly, and not only from the financial point of view of the taxpayer, by the substitution of women for men in the various branches of the public services. The standard of efficiency and probity often undergoes a marked improvement, owing to the employment of women of a superior type of mind and character. But apart from the fact that some man is displaced, and is less likely to be able to support a wife and family, thus throwing some other woman out of her normal employment, we are securing our improvement in environment in the present at the cost of destroying for future generations the very heritable aptitudes which make these picked women efficient and responsible public servants. Once again, we are sacrificing the present to the future ; we are exalting the individual and injuring the race.

It is to the married women whose natural home duties have unavoidably failed them that society may rightly look for such services to the community as are best rendered by women. Much of the pioneer work in social experiments, much of the necessary supervision of the women and children who, from one cause or another, have become burdens on the general public, should fall to the share of people who need not look for remunerative employment and are living in conditions enabling them to deal with such problems, with knowledge and sympathy. The childless married woman and the un-

married woman with private means are both individuals on whom we may rightly count to pay their debt to society in public service and private enterprise. It is difficult to estimate the immense amount of valuable work, the ceaseless stream of good example and inspiring influence that we, in England, owe to these two classes of women. But let us never forget the far greater, far deeper, far more permanent impress that we have received from those members of society in whose homes our men and women of thought, character and action were bred and brought up.

We cannot believe that it is a mere coincidence that the women whose names are best known and most distinguished for social, artistic or literary services were for the most part unmarried or childless, so that the special gifts by which they became famous have died with them. Angelica Kaufmann, Jane Austen, Christina Rossetti, Florence Nightingale, Harriet Martineau, Charlotte Brontë, Maria Edgeworth, Charlotte Yonge, George Eliot leave no descendants. Elizabeth Barrett Browning, Mary Somerville, Mrs Gaskell had children, but not many, and there does not appear to be a third generation.

We shall probably always have unmarried and childless women of a high standard of character and ability in our midst, but the danger of calling attention to their services lies in the fact that people are thereby inclined to regard them as our normal standard of womanhood. To argue that because such people have themselves leisure and energy for outside occupations, it is therefore right and expedient to force the additional duties of public life and political responsibility on the

majority of women who are already amply fulfilling a far more essential and exacting function, seems an extraordinary perversion of human judgment. On all grounds, physical, moral and mental, it is difficult to conceive a course of action more damaging to the future prospects of the race than to compel women, who between the ages of twenty and forty-five are fully engaged in the duties of the family, to enter the turmoil of industrial and political life. Certainly no sane person would follow the corresponding course when dealing with the animal economy of the country-side and the farmstead. At the same time, it is impossible to single out the exceptional cases for special treatment and to put premiums involving additional weight in the counsels of the nation on the unmarried and childless woman which would increase the "spinster influence" in the country and be to the detriment of those fulfilling their normal functions.

It is impossible not to see, at any rate in the upper classes of English society, that there is at present a real connection between the decline in the birth-rate and the movement to equalize the political and industrial status of men and women. We can study this influence at work among any group of women who are prominent in political agitation and social and philanthropic enterprise. Many of these women are unmarried, and very few appear to have the necessary minimum family of four children and upwards.

It would be extremely interesting if the secretaries of the respective Woman's Suffrage and Anti-Suffrage societies would furnish us with authentic figures as to the average number of children born per member of

each society. If such figures could be obtained, we do not doubt that they would throw great light on the psychology of the whole movement, of which the rate of progress, in modern Europe, as in Greece and Rome, is probably a very fair measure of the rate of decadence of the nation produced by the decline of the birth-rate among the abler sections of the community. It is a noteworthy fact that in some of the Australasian colonies, where women enjoy the suffrage, and in France, where women are actively engaged in business and commerce, the birth-rate is almost the lowest in the civilized world.

In the industrial sections of the community, and in the classes to whose hands much of the educational work is entrusted, the direct result of the habitual employment of women outside their normal sphere is to affect injuriously the prospects of the race and to undermine the position of men in their capacity as the natural providers for the maintenance of the coming generation. Moreover, if there be no appreciable coming generation to maintain, any stimulus to exertion beyond what has a purely selfish origin must cease to be effective in moulding the destinies of the human race.

Throughout the history of nations, the demand for the equalization of the status of men and women seems to come invariably from the classes—usually the more intellectual classes—when and where, for various economic and social causes outlined above, the marriage-rate and birth-rate have become abnormally and dangerously low. The connection between the two phenomena is one which all sociologists should study and watch with great care.

CHAPTER VIII

THE PROBLEM OF EDUCATION

The problem of education, like many others we have touched upon in the preceding chapters, is incapable of final solution. There is now no general consensus of opinion as to what is meant by the term, no accepted road on which we may confidently travel to attain the object in view, no agreement as to where, when and by whom the goal has been attained. The wisest man is most willing to admit that he has misused his opportunities and is but imperfectly educated.

If religion be understood in its literal sense of a "binding together," of a search for the true relation that should unite a man to the forces governing the universe, then we would suggest that the theory of education, or the "leading out," should be taken to mean a knowledge of the possibilities of development inherent in the human race, and a recognition of the limitations within which each individual must work. To any man, potentially, there is the chance of rising to the highest rank of human development; all men, actually, are subject to the limitations of their inborn qualities, and are compassed about by a network of obligations and restrictions without which the society

wherein they have developed could not be kept together. We have on the one hand to consider the inborn qualities of the individual, on the other to take heed that the State suffers no harm at his hands. It is the conflict of these two obligations, the reconciliation of these two opposing interests, that constitute the problem of education.

But to limit ourselves to the consideration of what we believe to be the true function of education would be to deal with less than half the question as it is at present usually laid before the general public. Far more attention is bestowed nowadays on the subject of training than on that of education ; and, as we have said before, there is no necessary connection between training, that merely enables a man to earn a living and exercise a trade, and education, that helps him to understand and adjust his duty to himself, his neighbour, his nation and his race. Yet training as a substitute for education, and training, especially literary training, as a preliminary step towards education, are both well-recognized facts among us, and we cannot leave that branch of the subject entirely out of our survey.

It may perhaps be asked why the problem of education, at first sight essentially an affair of environment, should be discussed at all in a volume which professes to deal with heredity. But the answer is plain. Even as we believe that religion is the only force strong enough to incline a normal man, of his own free will, to subordinate his individual interests to those of the race, so some authentic scheme of education alone will

enable him with the least harm, or with the greatest good, to effect the sacrifice and to lead the life which his religious instincts have prompted him to undertake as a necessary act in his recognition of the divine element vitalizing the Universe. Whether this subordination of self to the wider interests of society be the result of terrorized obedience to the laws and customs of a primitive community, or of acquiescence in the social conditions by which free play is given to various forms of natural selection in this world, and for the rigours of which rewards and penalties are allotted in the next, or a reasoned acceptance of irksome restrictions on account of their racial value, some form of religion, some method of education, are essential to obtain the ultimate intelligent triumph of the altruistic principle.

Now there are two classes of persons who seem fitted by natural circumstances to give education in the sense in which we have defined it. In the first place there are those whose experience of life has been of the simpler, more primitive type, and who, having accepted many things originally on authority, have seen no reason, as life has lengthened and experience has ripened, to question the accuracy of the empirical knowledge they received. It is to such people that we must go to find the accumulation of traditional wisdom, the strength of intuitive morality in their simplest and most impressive form. This class of mind is unfortunately not on the increase among us. Its destruction without any effort at a compensating replacement is probably largely due to the errors in training of the last forty years. Nevertheless, accept-

ing its limitations, there was no more important element of stability in the country, and, especially in contact with the very young, its influence was most valuable. The simplicity, the straightforwardness, the frank acceptance of authority which are concomitant to this type of mind appeal especially to the undeveloped faculties of the child, and can impress without confusing or fatiguing them. Hence we are all ready to acknowledge the immense advantage to be obtained by the association of children and young people of all ranks with the steadfast, right-living members of the cottar or fisher class, where this more direct, more intuitive sense of natural order has often found its resting-place. Many of us whose chief sources of knowledge have been from academic and literary spheres have little to show compared with the stores of experience, personal and racial, treasured up in the minds of these people of steadfast faith and undisturbed wisdom. Yet one of the results of modern tendencies in education has been to slight the value of this fund of human lore, partly on account of its inability to express itself in terms of the current superficial philosophy, and partly on account of the intuitive as against the argumentative form of support with which it upheld the substance of its faith. Not only have the children, owing to the hours allotted to compulsory schooling, been withdrawn for long hours from the homes where this most valuable influence would have found its normal sphere of action, but many of the ideas imbibed during school-hours have served directly to create an attitude of contempt and inattention for any knowledge not to be acquired in a school primer or text-book. Much

has been lost and nothing gained by the change in attitude and opportunity. It is to these genuine exponents of the simple life that our musicians and folklorists now eagerly go to collect the last echoes of our countryside dances and songs, of our legendary heroes and magical rites. We believe that the young people of the present generation have lost much by lack of contact and want of respect for the proverbial philosophy of their forefathers. It is a general rule in the upbringing of the young that the personality of the teacher, and the manner in which a subject is presented, are of far greater importance than the actual substance of the information imparted.

The second class of persons to whom we would readily entrust the functions of education are those who have grown wise in the experience of human affairs, men of penetration, intellect and wide outlook, whose judgment has matured with observation and mellowed with age. This is the class of mind best fitted to influence youth in its adolescent stage, best able to appreciate the doubts and turmoil which beset a man or woman on entering upon the stage of adult life. But since it is rare that we can have the personal services of this highest type of educationalist, it is to books that we must turn to acquire a knowledge of their ways of thought, and to possess ourselves of their solutions of the difficulties that beset us. Herein is the true justification of the literary training in vogue amongst us ; and herein, moreover, lies the original though forgotten motive which led to its adoption. But, admitting, as we do, the rarity of this type of mind, it is satisfactory to know how often

its final conclusions on problems of life and death, reached through years of laborious study and painful experience, are identical with those expressed in the simpler, more direct philosophy of the countryside.

When, however, we find the coming generations not only alienated from any form of religious observance, but also separated from both of the two sources of educational influence we have outlined above, it is time to ask ourselves how these great forces, which have hitherto moulded human destiny, are to be replaced, and what is the probable outlook for a nation that will not submit itself to their guidance.

Unfortunately, it seems to be a necessary part of the scheme for obtaining the current ideal of educational efficiency, both in Western Europe and America, that, especially as concerns the elementary schools, the teaching profession should be chiefly in the hands of unmarried and inexperienced women. This result is perhaps due partly to motives of economy ; but also there is no doubt that the teaching profession, given the modern system of training, is a more attractive opening to women, who have to choose a career out of a limited number, than to men, who have wider fields of activity naturally laid before them. At any rate, it is certainly more difficult to attract suitable men to take up teaching as a profession.

Now the effect of the celibacy of the Roman Catholic monastic teaching orders has often been commented on adversely, and has been said to produce a restriction of outlook, a want of comprehension and

balance, a bias against the larger interests and emotions of life. Yet the monastic orders and those who directed them were sensible of the danger incurred, and strove to guard against it in many ways. There was always a fund of tradition, of experience, of religious purpose at the disposal of its disciples. The fact that so many of our modern teachers, although compelled by the exigencies of circumstances to lead celibate lives, have not taken any binding vows to that effect, does not do away with the objection to placing educational influence in the hands of persons whose outlook on existence is necessarily limited and one-sided, and is especially curtailed in the direction of family life and the domestic circle, subjects on which right thinking and personal experience are of supreme importance to the national welfare. Nor does the encouragement of marriage among the women teachers, as we have already pointed out in the previous chapter, resulting as it does in a very limited number of births, lead to conditions which can rightly be termed "natural." The safeguards of definite religious and educational training, and the creation of a special atmosphere appropriate to the nature of the work undertaken, conditions which have been found to be necessary in the course of the vast experience of the Roman Catholic Church, do not exist in the case of the lay teacher, who is nevertheless rapidly acquiring many of the disabilities attached to her conventual forebears. Even the old "dame" of the village school was at least free from this defect of her modern supplanter.

The tendency which is growing among us to make

the institutions where our teachers learn their trade as far as possible "training" colleges — as their name indicates—and not centres of education—places for the acquirement of book-learning rather than for the development of character and the deepening of spiritual insight — emphasises the trend of national development. Many of the students who issue thence are only fitted to give the *training* in mental gymnastics which they themselves have received ; they are not capable, either by nature or by upbringing, especially at the immature age when they have to undertake these important functions, of exercising any true *educational* influence on the children who pass under their care. Nor does the life of arduous labour, both as regards wearing physical stress and incessant mental exertion, in a cramped atmosphere of super-regulated discipline and official supervision, tend to foster their subsequent mental growth, or make it easy for them to appreciate and overcome the limitations of their situation.

It is the fault of the system far more than of the teachers that so much of our English education fails to accomplish its purpose ; and, until some radical alteration can be effected in the aims and methods of instruction, any increase of the time spent in school is likely to accentuate the state of affairs we deplore. Be that as it may, to students of sociology, the spinster influence, divorced from the fuller knowledge, the riper experience that comes from personal contact with the deepest mysteries and emotions of life, is a disquieting feature of Western civilization, and seems at present

to be inseparable from the methods in vogue to obtain educational efficiency.

Surely people may be forgiven for asking themselves whether any degree of *training*, given within the conditions we have outlined above, can be accepted as the true equivalent of a small amount of *education*, acquired under the old circumstances of mutual helpfulness and natural discipline inside the family circle, where habits of obedience and initiative were acquired side by side with those of independence and respect.

It is an interesting and suggestive coincidence that the passing of the Education Act in 1870 was followed immediately by the drop in the birth-rate of the abler and more intellectual classes of the community on whom the chief burden, financial and administrative, of this as of most other pieces of social legislation falls. Twenty-five years later, when education was made practically free for all the industrial and wage-earning sections of the community, the decrease in the birth-rate was affecting these classes also, in spite of the fact that increased sums must have been available for the maintenance of their offspring. It is now certain that at least half the children who would be likely to prove the most valuable citizens, and best worth educating, are annually withheld from the community ; while one of the principal features to be noticed in elementary education, is the need for the establishment in increasing numbers of special schools for the feeble-minded and degenerate members of society. In these schools, the cost of education is many times that spent on the normal child, and, until powers of subsequent detention are granted, probably represents a waste or

misuse of time and money, as far as the future prospects of the nation are concerned. These steps in our educational policy, taken in connection with the alterations in the quality and number of the children who are affected by it, are worth more consideration than they have yet received.

We hear a good deal nowadays about the advantages of co-education as opposed to the seminary type of upbringing. If we accept the views expressed above as to the methods and aims of education, there is every reason why the two sexes should share equally and at the same time and place in the acquisition of the necessary knowledge, as they would naturally do in the ordinary intercourse of family life. As men and women they must work together, and as boys and girls they may well drink at the same sources of wisdom. It is when we come to the problems of training for the purpose of gaining a livelihood—which has become the predominant feature of our English educational system —that a separation of the two sexes seems essential.

It is often said that the great fault of our educational system is that it does not take sufficient account of the probable future occupations of the scholars, and that it fails to prepare them to exercise any definite craft or profession. The truth seems to be that, from 1870 to within a few years of the present time, the whole population were trained as if clerkships or some sort of clerical situation were the only openings to which a boy or girl could look forward. To read, to write, to add, to have an inaccurate recollection of some of the principal historical episodes and

of geographical nomenclature was too often the sole result of the expensive training undergone by the children of the nation. For the most part it was neither education nor training, in any reasonable sense of the word. Though the influence of the system on the children was assuredly considerably better than that of the worst and most degraded homes, it is certain that, in the normal type of school, the atmosphere was far less fitted to form useful, intelligent, self-reliant citizens than the home surroundings of the average family from which the children were withdrawn during the most impressionable years of their lives. And its worst error lay in the dissemination of the idea that the responsibility for the right upbringing of children does not lie with the parents. In a recent address on educational matters, the speaker inferred that it denoted moral obliquity to doubt the wisdom of the Education Act of 1870, and almost in the same breath bewailed the lack of the sense of parental responsibility in matters of the upbringing of children. We believe that his lamentations were largely addressed to the inevitableness which connects cause and effect.

If the parental desire was that any given child should be trained for a clerkship or other opening in which some degree of literary achievement was essential, and if the child appeared suited for that profession, then the opportunities offered in the public elementary schools might reasonably be taken advantage of. But if a wider choice of occupation lay open to view, if the inborn qualities and aptitudes of the child did not lie in the direction of clerkly habits of life, then the compulsion exercised to make all families submit them-

selves to the type of training inaugurated by the educational authorities in 1870 was an ill-judged, mischievous and tyrannical exercise of power.

It is often said that the elementary schools of the country teach the children of the nation the value of discipline and the habit of order. Certainly a superficial acquaintance with the appearance in class of the masses of children therein collected would give this impression. The marching, the drilling, the prompt movement to the word of command all confirm the casual observer in this assurance. But it may be doubted how far this attitude of attention and obedience is the outcome of any intelligent acceptance of the principles underlying the relations between authority and subordination, and how far it is due to a lulling to sleep—from force of habit and acquiescence in surroundings—of the youthful intelligences and growing characters that are subject to its influence. If it be a purely mechanical acceptance of familiar and inevitable conditions, following the line of least resistance, its value as a training in character is probably less than nothing for anybody who is hereafter to take charge of his own destiny and to exercise in his turn the responsibility of exerting authority or of withstanding it. An examination of the ethical basis of discipline in schools and some inquiry into the psychological or possibly the physiological effects on the vast numbers of growing children that are placed within its sphere of influence would be most valuable.

Moreover, if we believe that there is great advantage to be obtained from the association of the immature

with the adult mind, the inexperience of many of the teachers, the superficiality of their training, the relative proportions of teachers and taught, the impossibility of intimate contact between them in the time and space allotted, the artificiality of the discipline, and the inevitable destruction of much of the natural intimacy between parents and children, master and apprentice, as a result of enforced absence during school-hours from the home, the field and the workshop, do not give us any assurance that our methods of training will stand the strain of a careful inquiry into their effects on the national character.

There is, to put it mildly, a strong probability that the environment normally provided by the parents and the immediate family will be fairly well suited to children who inherit the same inborn qualities, that the same occupations will attract their capacity, the same interests absorb their leisure hours. Again, a closer acquaintance with the parental aptitudes and failings and with the communal life of a district or of a class of workers would often enable us to suggest and plan out a course of training more in accordance with the probable qualities of the children than the present uniform system of education, given the liberty and encouragement to make the attempt.

Even the recognition of the well-ascertained fact that town life and country life are responsible for entirely different modes of thought and development, and make quite other demands on the character and capacities of men and women, would be a first step towards supplying education and training of the type fitted to the intelligences of the children who have to

undergo the process outside their homes. In each case, the skilled observer notes constantly recurring gaps in the experience and impressions of the child; he perceives utterly different powers at work—the stupefying yet disturbing crowd-influence of the city, the peace-making and soul-enlarging nature-influence of the countryside. Each of these inherent attitudes of mind requires attention, explanation, amplification; each demands the introduction of some compensating but entirely opposite principle into the system of education. We must try to make some estimate of the specific influences at work on the children of each district and of each social grade before we can think ourselves in a position to lay down the law as to the right methods of training and education to be followed out in regard to them. It is this crying need for differentiation and for specialization which is the chief obstacle to any really satisfactory scheme of centralized national education.

The great error which misled the framers of the Act of 1870 was one which has misled many generations of statesmen—the belief in and desire for uniformity—and a limitation of outlook to their own personal experience. Instead of recognizing the segregation of characteristics in different sections of the nation, instead of realizing and providing for the development of the specialized qualities, aptitudes and occupations distributed, often geographically, in our midst, they endeavoured to establish one uniform system of training throughout the country, founded on a literary basis, and directed chiefly to further the advancement of the type of mind with which they were best acquainted.

We are just beginning to emerge from the desolation of pothooks and blackboards into which their mistaken zeal led us. Our education authorities occasionally recognize a school outside the normal run—trade schools, schools for home-making—and serious efforts are made to form centres of technical instruction, appropriate to the industries and specialized character of the population of each district. But further differentiation is the most crying need, together with a recognition of the fact that the various sections of the community differ inherently among themselves, and, to make the most of their possibilities, require methods of training differing profoundly among each other in scope, aim and duration.

Far more use might be made of the natural development of childhood in a well-ordered home of almost any class, and much help could be obtained from a wise encouragement of individual and local enterprise. Unfortunately, it is almost inherent in any form of centralized official control to press for uniformity and to minimize the opportunities for private and local endeavour. If the home environment be so corrupting that the removal of the children from parental influence becomes a necessity in the interests of society, the laws of heredity would lead us to believe that a clear case has been established for preventing the creation of further decadent citizens by the rigid segregation of the parents.

Whatever be the methods of training in vogue in a country—in contradistinction to the principles of education—whether we agree with them or regard them

as a source of not a little of the social disorders we see around us, it seems clear that the training of boys cannot be put on the same footing as that of girls, although the educational problems are apparently the same for both sexes. It is a fundamental condition of much of the work of this world, that duties must be performed by men, in spite of any disturbance of the family life, by illness, sorrow or death. The railway signalman must leave a sick child to go on duty, a mariner must take his ship out of port and desert a bed-ridden wife, a doctor must go on his rounds and forget the burden of domestic trials and anxieties. The profession of men is often necessarily apart from and outside their home life. But in the case of women the accepted outlook is quite other. No call from the outside world is recognized to be sufficient to separate a mother from a sick child, or to withdraw a woman from a home where her presence is urgently required.

The importance of this well-recognized difference of obligation has not been sufficiently grasped. It is a variation of psychological attitude of profound meaning to the welfare of the race, and depends largely on the proposition stated in a previous chapter, namely, that the natural duties of a man are directed to the maintenance of present-day conditions, while those of a woman infallibly lead her to take heed for the future welfare of the nation, which lies largely within the circle of domestic occupations, and includes much of that environmental influence which we wish to classify under the name of education.

Therefore, whatever training be imposed outside the home circle, it is desirable that from the beginning the

two sexes should view its importance in different lights. It may be right to impress on boys that their first duty is to perform the tasks which have been placed upon them from exterior sources, that school must be attended, that lessons must be prepared, in spite of urgent calls from parents and near relatives. It is an attitude which will probably be essential to their success and utility in after life. But the same obligations do not apply in the case of girls ; and, if we accept the fact that, for instance, one of the principal duties of womenkind is to mind babies, then it is useless to expect an intelligent girl of twelve to believe in the truth of our doctrine, if she knows that the baby goes unminded at home while she is committing to memory a list of the capes of China, or is experimenting in the incorrect use of the split infinitive.

One of the most serious drawbacks to almost any form of school training for girls—even accepting the possibility that they learn more in many directions there than they would do in a well-regulated home —is the fact that it is essential to the discipline and efficiency of a school that English grammar and physical geography should be considered before spring cleaning and jam-making, while it is even more essential to the welfare of the homes of the nation that spring cleaning and jam-making should, when the processes or their equivalents become necessary, be given the position of pre-eminence.

A few years ago, one of our northern borough education authorities solemnly passed two instructions on the same day and at the same meeting. In the first it forbade the parents to keep elder girls at home

and away from school in attendance on their mothers for the two or three weeks following childbirth, threatening defaulters with the heaviest penalties of the law. In the second, it recommended the purchase of full-sized dolls and complete layettes as part of the school equipment, in order to accustom the elder scholars to the care and protection of infant life. Comment is superfluous. Nothing that a girl can learn at school can be compared in importance to a thorough grasp of the fact that her first and most urgent duties must always be within the family circle, and that the welfare of the future citizens of the race is the province of social endeavour which falls naturally to her share.

As we have already said, the problem of education and the problem of training are in many aspects two entirely separate affairs ; that of training is a matter of expediency for the individual, of efficiency for the nation. As training affects the chances of survival of one man rather than another, of one generation in a nation instead of its rival overseas, so it exercises an indirect effect in determining racial or individual preponderance. But the history of the Jewish nation shows us that, given an educational and religious upbringing of a satisfactory type and of sufficient strength, any form of training may be safely superadded.

The outlook upon life as a whole, the question of the right development of the inborn qualities of each man or woman—duly considering the necessary subordination of the individual to the race—the teaching of traditional wisdom and racial experience, the true relation of the able and competent to the weakly and feckless, the amount of sacrifice to be exacted from the

present for the benefit of future citizens, or the weight of the burden to be cast on future generations in order that certain existing persons may live unchecked and die unharassed, all these problems should be included within the scope of education, in so far as such subjects can be separated from the sphere of influence of religion. They are matters which are unrecognized by the education authorities and are often ignored or slurred over by the Churches. Yet all students of heredity are deeply concerned with the solution thereof, for in a correct adjustment lies the turn of the scale which in the long run has decided the fate of nations.

CHAPTER IX

HEREDITY AND POLITICS

A DISTINGUISHED bishop and penetrating scholar of the last generation, to whom one of us was presented for the first time many years ago, opened the conversation by saying: "What is your opinion of the theory of politics?" At that time we had no answer ready; and, in spite of all the attention paid to political questions, it is clear that most men, especially those engaged in active political life, have still no idea that a general theory of politics is necessary or even possible.

What is the ultimate aim of government, administrative and legislative? Is there indeed any ultimate aim, when we pierce beneath the shallow puerilities of such modern phrases as "that the will of the people should prevail"? "What's for their good, not what pleases them, that's the question," was Cromwell's statement of the problem; and, in their characteristic frank brutality, his words have a truer ring than most of the question-begging phrases with which politicians pay their way at the present day.

But even if we accept "what's for their good" as a step in advance, we have still to inquire into the meaning of good. If by good we mean the comfort

and pleasure of the present fleeting generation, we may but revert to the usual position by another road.

The older statesmen had a larger outlook than some of those of to-day. The theory of power, which was replaced first by the principle of protection and then by the economic and social theories of free trade and *laissez-faire*, contemplated a strong and sound, self-reliant nation both from the economic and military points of view as the object to be kept steadily before the eyes. The methods by which this goal was sought were frequently defective, especially from the economic side; but the consciousness that aggregate economic wealth was not the only or even the highest object of government was a better foundation for political thought than the greedy protectionism or the doctrinaire *Manchesterismus* which successively replaced it.

Now a "theory of power" which takes account of modern biological knowledge in a strenuous effort to improve the physical, mental and moral state of the race both by environment and heredity, and by their interaction one on the other, seems to us a good basis for political endeavour. We do not claim for it finality or even completeness. But it gives a point of view which has been almost entirely overlooked in modern times, and one which is more likely to lead in the future to many of the conditions which politicians wish to secure than the seemingly more direct roads, some of which, when followed, drop into intervening chasms and quagmires.

For, if we can raise the innate qualities of our race, so that it becomes abler, stronger and more efficient, not only will it be in a state to take better advantage

of any improvement in the environment, but it will naturally improve its own environment. Improvements in environment are made possible by the genius of our ablest men and carried out by the ability and industry of competent administrators. So, if the average ability of the nation be raised, improvements in environment will assuredly follow. If, on the other hand, the racial efficiency fall, it requires more and more expenditure of effort to keep up the rate of environmental advance, and thus to maintain the position already won. Finally, the race would become unable to maintain its existing environment, and a decline in civilization must follow.

Let us then accept the racial point of view, and regard as the ultimate aim of politics the improvement of the racial qualities of the nation. Let us consider both legislation and administration from this aspect. Let us ask of each proposal, not how it will affect the comfort or convenience of the existing generation, but how it will affect the inborn qualities of future generations.

On these lines we shall find a new clue to politics. It will not necessarily follow that in practice this clue ought exclusively to be followed. Future gain may sometimes be purchased at too heavy a present price, or, at all events, at a price which it is impossible to get the present generation to pay. But, in existing conditions, the racial point of view is almost entirely ignored, and more good may be done in emphasizing a forgotten lesson, than in attempting a complete analysis of the whole political problem.

Although no broad principle underlies the distinction, it may be convenient to classify the possible effects of legislation on race into the direct and indirect. We should get direct effects if we determined to segregate the feeble-minded, or, on the other hand, paid governmental subsidies based on a principle the reverse of that of the graduated income tax to the competent parents of healthy and numerous children. We get indirect effects when, by the results of humanitarian laws, we make things too comfortable for the wastrel, incidentally encourage his reproduction, or, by the pressure of the concomitant taxation, lead efficient families on the border-line of their natural social standard of comfort to restrict the number of their children from motives of economy.

Till the present day, no direct racial legislation has been attempted, though the time is over ripe for dealing with the problem of the feeble-minded. We may leave, therefore, direct effects till we consider the possibilities of the future.

But the indirect effects of legislation on race are an old story. If we are correct in believing that the variations of type among us, as indicated by the different social strata, show the existence of variations of innate physical and mental characteristics as real though infinitely more elusive than the differences between, for example, the Highland cattle and the Guernsey cow, then we must recollect that conditions suitable to one type are not necessarily applicable to another. Uniformity of environment is only possible for an undifferentiated race, not yet emerged from the most primitive conditions of social organization. Almost

any change of law in states of complicated social structure favours economically some class at the expense of another, and thus makes it easier for members of the one to marry early, and rear successfully a large number of offspring. Hence all legislative action is necessarily exercising a selective effect from the biological point of view, and the danger lies in the fact that this selective pressure is applied not only ignorantly but actually inadvertently. Hence arises the importance of politics from the racial point of view. If we establish a preponderating rate of reproduction in any one section of the community, in a few generations it increases relatively so rapidly in geometrical progression that it tends to swamp the rest. Its peculiarities become the characteristics of the race, its distinctive features the general qualities of the nation. On the other hand, if we make the environment harder for any one class, we tend to depress its rate of reproduction, and it may be reduced rapidly in number relatively to the stocks which have received more favourable treatment. Its qualities and characters disappear from the race.

It is essential to fix in one's mind this great truth of the fluctuating racial character of a nation. The race is not of constant quality, immutable through the ages. It is an organism, sensitive to every influence, and moulded to one form or another as a careless touch is laid on it here or there.

This result holds good in all ages. Even when the race was reproducing itself at a natural rate, the number of marriages depended on the pressure of external causes, economic or political, and rose and fell

with changes in the price of corn or with the declaration of peace or war. But, since 1875, the people have learnt to restrict voluntarily the number of births in married life, and the rate of reproduction has become almost indefinitely more sensitive to outside influences, such as those exercised by social conventions and habits and legislative, especially financial, burdens.

In all ranks of life children are a heavy expense—an expense which rises roughly in proportion to the position of the family, and falls heavily on all save on the very rich in all classes (that is, on those who have more than enough to support themselves in their natural position), and on the thriftless pauper, who can now look with confidence to the State for the maintenance of himself and an unlimited number of equally casual offspring. In almost every household, an increasing number of children means a diminution in comfort and economic freedom, while, where the income is small, each new child may mean actually less food and clothing for the existing members of the family.

This being so, economic causes, added to other motives, lead at once to restriction of the birth-rate among the thrifty and far-seeing, as soon as the burden of children is felt to be too severe.

On the other hand, among the reckless and incompetent, especially when they suffer from mental defect, no such restraining motives are operative, and no restriction of births checks the propagation of their undesirable qualities. They reproduce themselves at a natural rate, and are only checked by natural causes. In old days, the pressure of life was more severe.

Fewer of the unsound lived to reach maturity, and the very high infant mortality among their offspring tended to weed the tainted stock out of the race. Out of a family of ten or twelve, only the one or two, whom the law of averages tells us may be as good or better in development than their parents, could be expected to survive.

These considerations open up the broadest question we have to investigate. We have already dealt with one aspect of this question when considering the selective action of disease. Improvements in medicine, surgery, sanitation and hygiene weaken the selective action of disease, and check the purification of the race from the predisposition to disease. But we have seen reason to hope that the compensating advantages, even from the racial point of view, may be greater than the loss.

But the amelioration in the environment due to improvements in medicine and hygiene is only one side of a general tendency. Misfortune and lack of success of all kinds are now met with help both from charity and the State in a way unknown before. We hear little about the principle of least eligibility in the distribution of relief. Hungry school-children are fed; unemployed labourers are supported by relief works; the sick are tended gratuitously in well-appointed hospitals; the old have pensions freely given to them regardless of their previous record. As Dr Tredgold has well put it: "It is impossible to look round without seeing that the entire country, from John o' Groats to Land's End, is flooded with institutions, societies and agencies, not for the better-

ment of the fit, but for the care of the unfit : agencies whose chief mission is to provide shelter, food, clothing, comforts, medical treatment and other forms of assistance for those of proved mental, physical and social incapacity ; and even for those who, having the capacity, will not exert it. . . . I have no hesitation in saying, from personal experience, that nowadays the degenerate offspring of the feeble-minded and chronic pauper is treated with more solicitude, has better food, clothing and medical attention, and has greater advantages, than the child of the respectable and independent working man. So much is this the case that the people are beginning to realize that thrift, honesty and self-denial do not pay."

From such a competent observer as Dr Tredgold this is a terrible indictment of the result of indiscriminate and uninformed humanitarian legislation and charity. But when we pass from the consideration of the direct effects of such action to the more wide-spread indirect consequences, we come to see that even more harm is done than appears at first sight.

All these methods of relief cost money. Whether given voluntarily in charity, or compulsorily in rates and taxes, that money goes in unremunerative expenditure. Helping a competent man to establish himself in a secure position may benefit immensely the resources of the nation. Assisting a "feeble-minded and chronic pauper" to bring into existence and rear to maturity an indefinite number of feeble-minded children, increases incalculably both the present and future drain on the wealth of the community, besides increasing the stock of preventible misery in the world. Even giving those

feeble-minded children an education in special schools, which cost three times the relative amount that do normal schools, is in large measure a waste of public resources. They will never be more than just able to keep themselves under competent direction, and the money lavished on them might have trained double the number of competent workmen to a higher degree of useful skill. Moreover, unless the control and supervision last through life, the training may even do permanent harm in making the unsound less unattractive, and hence more likely to marry and give birth to and rear children to perpetuate their infirmities.

In this and other ways the money and energy spent indiscriminately may be much worse than unremunerative. It may actually tend to multiply the unsound, and increase the average degeneracy of the nation.

Forcibly to take a share of the earnings of those who are not competent to spend their wages wisely, and to lay it out on their behalf on education, clothing and food, may result in an advantage sufficient to compensate for the destruction of personal responsibility. To abstract more than is strictly necessary for national purposes from able and competent people, who can make good use of their resources, is a step on the downward path of discouragement, too often meted out to our best citizens. The parable of the Talents contains teaching which is at least as authentic as the lesson in that of the Good Samaritan.

And now let us turn to the other side of the shield. As these agencies are established with the avowed intention of favouring the unfit both directly and indirectly, and as they tend to encourage the more rapid

reproduction of the unsound, so they bear hardly on the fit, and not only check the efficient members of society who might desire to bring up a natural number of children, but impair the conditions of environment in which these children might otherwise have been reared. The supplies which go to the unsound in all ranks of life, either through inheritance, charity, or through rates and taxes, will always be a direct and unprofitable drain on the national resources. As much as is spent in these ways, so much the less is there for other purposes. Less is spent directly in the wages of competent men, less capital can be accumulated to stimulate further enterprise.

Now a demand for the services of competent men brings more of them into employment, and tends to raise their rate of wages. Hence more competent men are in a position to buy goods, and they are all able to buy more. Therefore industry, and with it the wealth of the country, is increased. Moreover, more competent men are able to support wives and families, and that most essential part of the future wealth of nations, a supply of competent children, is increased.

If, on the other hand, we trace that part of the withdrawn money which would have gone to swell the stores of accumulated capital, we are perhaps on more debatable, or at all events more debated, ground. Still, most economists are agreed that the accumulation of capital, by increasing its supply and by cheapening it, stimulates industry, and again brings into employment the services of competent men, with the beneficial results we have seen above.

Both these processes are checked by the worse than

unremunerative expenditure which goes to favour the unfit at the expense of the fit. Hence by it the number of competent men able to earn a living is diminished, while the average wage of those in employment is lowered.

Much of the unrest in the labour world at present is due to the failure of wages to rise from 1900 onwards in proportion to the increased cost of living, an increase which will probably continue and may accelerate. For part at all events of this failure we may look to the vastly increased unremunerative expenditure which has gone to maintaining and superintending the unfit. Directly, they take from the nation money which would go, one way or another, in increased wages. Indirectly, generation by generation the result is to swell the number of the incompetent, and decrease the average inborn efficiency of the race.

At one point questions of practical politics touch an even wider problem of race than those which deal with the differences of inborn qualities of various sections of one nation. The effect of the interbreeding between different races is one of the most difficult subjects which the future has to face. Much more knowledge must be acquired before we can deal confidently with it. Yet some tentative conclusions may already be formulated.[1]

Both by experiments with animals and by observations on mankind, new races are found to arise by a lucky cross, and subsequent isolation and inbreeding.

[1] See *The Foundations of the Nineteenth Century*, by H. S. Chamberlain, vol. i. p. 269.

The thoroughbred horse has arisen by the union in the past of Arab stallions with good English mares, and the careful preservation of their progeny from other strains of blood for many generations. The nations of ancient Greece and Rome and modern England and Japan arose from definite crosses at one period or a few periods in time, and subsequent isolation for longer or shorter periods of years, secured to them by their geographical position on peninsulas or islands.

It is not easy to predict what elements will give a successful cross. Firstly, it is clear that the parent races themselves must be virile and sound. Secondly, if they are too divergent, we get a mongrel race with the best qualities of both ancestors blurred. The cross-breeds of South America nowadays, and the mixture of races which followed the expansion of Rome and heralded its decay, point the dangers. Thirdly, the new race must have a time of isolation and inbreeding to establish itself, show its worth and fix its characters ; and this is the rôle played by the separation and political crystallization of distinct nationalities. Fourthly, the main theme of this book, a constant selection of the best elements must be maintained within the nation. Fifthly, occasional re-crossing with other, not too dissimilar, strains may add to the vigour of the race, provided once more that re-crossing be limited in time, and that the new stock be appropriate and well-bred.

Little attention has been given yet to the effect on the average national character which is likely to be produced by the continued immigration into England of large masses of people from Eastern Europe.

They are for the most part already of mixed race—typical slum-dwellers who have settled in the slum districts of our large towns, and have taken possession of large areas of London. From the fact that the governments of their own countries show no concern at their departure, it is fair to assume that they represent a class of the population who have no great value from the social and economic point of view. It is clear that they belong to a different type of organization from the people they displace, for they are able to flourish in conditions which are deemed degrading for the native English population.

It would be most desirable to have some definite information as to the attributes and previous social history of this class of immigrants before they are admitted to our shores. What are their racial characteristics, their physical infirmities, their mental capacities, their moral proclivities? It is certain that they find themselves in a more favourable environment than the one they have left behind, but from our point of view the question is whether they represent a more desirable class of citizens than, let us say, the two hundred thousand emigrants who annually leave our shores for the colonies—for whom, in fact, we exchange them.

Moreover, if they are to be absorbed in the mass of the population, it becomes necessary to inquire into the results of intermarriage. Does the cross between our own race and these Slavs produce good results? If the results of a first cross are good, are the racial qualities of the half-breeds improved or deteriorated by further admixture of alien blood? All these are questions of fundamental importance. Yet, when the

Aliens Bill was under discussion, we heard much of unfair industrial competition and much of the sacred principle of the right of asylum for political and religious refugees, past, present and to come, and little of the welfare of the English race and of the biological problems which are the real heart of the matter.

To improve environment is a favourite occupation of all good people, and it is generally accepted as a beneficent action towards the community, in whatever circumstances it takes place. Now let us take an illustration from the gardening or farming world. To trench, stir, fertilize and drain a tract of ground is a praiseworthy effort of the husbandman ; but it is not complete in itself. The second step, even more important than the first, is to replant that ground with good seed. To leave the newly stirred area to be overrun with chickweed and groundsel of however robust a growth is not a beneficent action—better the old, ill-grown plants of greater utility, the shabby pasture-land, the short-strawed wheat. But one thing is certain, the ground will not remain unoccupied.

So in the world of human beings. To improve environment does not necessarily lead to the production of a finer race, though it is worth accomplishing for other reasons, and, as we have seen above, brings about a separation of the sounder stocks from the worthless—a separation of great biological value. But if the district which has been cleared of its insanitary dwellings, and has had large sums of money spent on the provision of a better water-supply and an efficient scheme of drainage, be immediately taken possession

of by a type of inhabitant accustomed to a lower standard of cleanliness and hygiene, the result may be a marked increase in the less desirable elements of the population, while the better type of man will move off, and if he does not leave the country he will be squeezed again on to the border-line of subsistence by pressure from below. If the improved environment be due to the exertions and foresight of the people who will profit by it, it will probably have the desired effect. If it be the result of action from above, and lead to some species of migration of an inferior type, the biological results of the improvement require to be most carefully scanned. Herein lies the danger of all environmental improvement without adequate consideration of racial effects. Without due forethought, it is as easy to sow tares as corn, and where the human race is concerned there is no annual harvest or stock-taking, at which the one can be separated from the other. Nor, indeed, is there any sharp line of demarcation between the two. All we can say is that there are tares and there is corn, with every degree of human imperfection intervening ; and we may safely assert that the tares are usually the most prolific and least exacting organisms of the two. With human beings, as in the animal and vegetable worlds, it is the higher types who require the greater care and consideration.

"The Eugenics of Migrants" is the title of a suggestive paper which was recently published in the *Eugenics Review*.[1] Nearly every species is limited to a restricted environment, in which its specially developed

[1] By Major Charles E. Woodruff, M.D. *Eugenics Review*, January 1911.

qualities are beneficial and have a survival value. Each type that migrates will, in time, either die out or exhibit the inborn characters which fit it for residence in its new place of abode. The original prehistoric migratory movements over the surface of the earth were extremely slow, and the type had time to alter and evolve new combinations of characters during its journeyings. But with our rapid means of transport and, in England, with the unrestricted right of entry to our shores, any alteration of environment by legislative action or social endeavour leads to an immediate movement of population. We make the conditions of life easier. Does a good class of citizen take advantage of the betterment to spread itself out, or do poorer specimens of humanity crowd in and seize upon the opportunity to multiply up to their lower level of subsistence? We stiffen the standard required for successful survival. Do we squeeze out some deserving members of the community, or do we discover and set free the families in which energy and endurance lie concealed?

It is a fundamental mistake to think that any type can dwell anywhere. The migrant himself may not perish prematurely, but the permanent survival of the stock he represents depends on the power of adjusting the environment and the possibilities of adaptation inherent in the individual. Tall men will survive in one set of circumstances, short men are essential to another; there is a relation to be observed between the intensity of light of a region and the depth of pigmentation of the skin; nostrils are narrow in cold climates and broad in damp, warm atmospheric conditions. The size of the brain and the general level of

intelligence vary with the demands made on a population for forethought, ingenuity and craftsmanship. Where climatic conditions or philanthropic assistance do away with the necessity for obtaining shelter and clothing by personal exertion, and where the resources of Nature and the good humour of society provide all that is required in the way of sustenance, there is no survival value in the possession of such qualities as industry or skill, sobriety and frugality, and, given a sufficient number of generations, these qualities will assuredly show signs of decay.

Here then we have the reason why a study of anthropology is of such supreme importance to those who take upon themselves the responsible work of directing a nation. One type will survive and multiply in conditions that are fatal to another. An alteration of the conditions will affect at once the relative chances of survival of two interacting species ; and every piece of legislation, every effort of social enterprise, is practically a weighting of the scales for or against one variety as compared with another.

The tall blond Teutonic race tend to disappear as soon as they reach the enervating shores of the Mediterranean Sea, although they persist a little longer in the cool uplands, which more nearly resemble their northern place of origin. City life is also found to be destructive to the fair-skinned stocks, who are among the most successful colonists of the open spaces of Canada and the United States. The negro and the Indian die of consumption in northern climates ; the white man suffers increasingly from disease as he goes south, and has to be hurried off to hill stations and

alpine sanatoria. We may take it for a fact that, should migration cease, each local population would in time become adjusted to its climate and environment; while a constant movement of population must lead to the perpetual destruction of types that are unfitted to the new surroundings.

A very great deal of human energy is certainly wasted in trying to alter environment to suit capacity, instead of distributing individuals in existing conditions which are favourable to their development, or in segregating and so putting an end to types which cannot under any circumstances be profitable servants to the nation as a whole. Endless instances will occur to people who are accustomed to deal in different capacities with men throughout the world, as to the importance of considering the inborn or hereditary qualities of human beings. The Italian labourers, for instance, can work with far less discomfort in the great transalpine railway enterprises than workmen from Germany or Switzerland. The darker race, for some reason unknown to us, suffer to a less extent from the painful "caisson" disease consequent on the high-pressure tunnelling operations. Thirty years ago, when all the corn coming to England was discharged at the ports in sacks carried on men's backs, it was well known that short dark-skinned labourers, although on an average they took a smaller load in the course of the day, would nevertheless hardly suffer from an agonizing form of "sore back" due to the friction of the canvas sacks, which would soon disable the tall, fair-haired, light-skinned type of man. Again, in Portugal, where the labourers of the southern districts, a heterogeneous race of mixed origin, are said

to be of an indolent, unintelligent character, a large employer of labour declared that it was possible to get workmen of energy and capacity far above the average of the Lisbon district by drawing supplies of labour from the villages around the lines of Torres Vedras, where, more than a hundred years ago, the English soldiers left behind them a large number of illegitimate offspring. Here then we have an entirely overlooked effect of our Peninsular campaign.

We have seen reason to believe that the evolutionary meaning of the class divisions, which appear among all civilized and semi-civilized nations, is to be sought in the greater efficiency those divisions give in the performance of the many and varied functions of a civilized state. In a blind, rudimentary and imperfect way, successful nations have bred different qualities into different sections of their people, just as they have, to a clearer extent, into the different species of their domestic animals ; and, since children tend inevitably on the average to inherit their parents' aptitudes, since sons frequently follow their fathers' professions and avail themselves of the advantages of the family environment, this segregation of qualities makes for efficiency, by adjusting the inborn characters of each man to the work which will lie ready to his hand. Once the process has started either in man or beast, we are in a fair way to build up the class distinctions which seem to some people, where man is concerned, the height of stupidity, prejudice and injustice, and, in the animal world, a triumph of foresight and human intelligence.

Thus the labouring classes gradually appropriate a

large share of physical strength and endurance, and the instinctive skill in manual work which so often excites our admiration. Thus the clerk inherits assiduity and accuracy, and the honesty without which other clerkly qualities are as nought. Thus the manufacturer's son is born with the power of managing the complicated system of his mill, and of foreseeing the combinations and other factors which control the markets for his goods. Thus the soldier possesses the instinct of self-sacrifice, the power of commanding men, with that quick insight and decision in a dark situation which are necessary for success in the "fog of war." Thus the old governing classes of England, as of other similar nations, incorporate an instinctive sense of public duty and acquire a large share of the natural aptitude for administration.

It has been said by a competent observer that the collective stupidity even of the most intelligent and civilized societies is stupendous. "A society will profess to believe in human equality and yet maintain enormous differences of social position. It will destroy distinctions of rank and thereby leave the field open for the most insidious and irresponsible form of power, that of plutocracy. Its democratic jealousy will debar the upper classes from all access to honourable and useful careers of social service, and it will thereupon complain of the idle rich. It will try to cure poverty by alms-giving, and to restrain animalism by preaching celibacy." What are we to take as the real mind of society on these points—the doctrine it preaches or the conditions it establishes? Who is to interpret this oft-quoted, much-vaunted "will of the people"?

This irrationality and childishness of modern society is extremely striking, and suggests nothing so much as the attitude of a community which is being pushed aimlessly from below, not led intelligently from above. The probable result of a determined and successful effort to keep down class distinctions would be a return to the condition of an undifferentiated chaos of humanity. The only logical result of a real belief in human equality would be to bestow the suffrage equally on the feeble-minded and the inhabitants of prisons and lunatic asylums. An attempt to destroy the governing classes is as little rational as an attempt to abolish the labouring classes. Both are highly skilled, highly specialized varieties of humanity ; both are absolutely essential in the modern state. Even the advocate of universal suffrage sees it necessary to limit the distribution of power somewhere. To denounce class distinctions and to preach human equality is to misunderstand the conditions under which civilization has emerged from chaos.

Now as regards the governing classes there is a very interesting tendency at work. In response to the popular mandate, fortified by a belief in human equality, both in national and local affairs power has been taken from what we may term the old hereditary governing class, built up by a thousand years of social evolution. It has been placed apparently in the hands of those who win the suffrages of the mass of the people, and in reality has passed largely into the grip of such persons as can frustrate certain intellectual obstacles placed in their way by the examination of the Civil

Service Commissioners. But neither of these methods of selection gives us any assurance that we have secured the services of a competent legislator or an administrator. A man serves his country either from a sense of duty or for the prospect of material gain and personal advantage; and we are now at the beginning of the evolution of two other species of governing classes, so that only time, a long time, will show what this new segregation of qualities portends. The arts of the demagogue, who possesses the power of influencing the masses, are also highly specialized qualities, and will be inherited directly from father to son. In America, where there are no classes, no differences of rank and all men are born equal—hypothetically at least,—the "boss" is already a well-recognized variety, with special characteristics of his own. These characteristics are said to consist of enormous powers of physical endurance, vast supplies of nervous energy, great organizing capacity and a phenomenal "jaw" development. The power of passing examinations, which has been humorously described as a low form of cunning, has also been shown to descend from father to son. We have therefore some indications of the qualities which will adorn our new governing classes. The one will fill our elective bodies and our public services, in virtue of their power of controlling or of ingratiating themselves with the electors; and the other, the real masters, will form a bureaucratic class, with special capacities, first of all, for outwitting examiners, and afterwards for rigid adhesion to official precedent, and power of managing the first-named class, to whom they are nominally subordinate. On considering this prospect, it is cold

comfort to think that each nation probably gets the governing class it deserves.

But we can follow our investigation further. An increasing number of young men of the upper classes in England, finding fewer careers in the government of the country open to them, and certain of far better remuneration elsewhere, are participating in the trade of the country, where singleness of aim and assured standards of personal honour and corporate honesty are found to have a substantial commercial value. Now the same process has been at work for a long time across the Atlantic. For many years past, the great majority of the ablest, best bred, best educated men of the United States of America have found their natural sphere of activity in the business world, where their innate capacity for government has once more come to the front; until it is extremely doubtful whether the Senate of the United States and the political boss, representing the people, or the manipulators of the great Railroad and Trust companies, representing whatever exists of a hereditary governing class, are the true rulers of that land of freedom. We are apparently at the beginning of the same process in England.

On the other hand, it is becoming increasingly difficult to find suitable men who are willing to serve on the numerous bodies elected to deal with our national and local affairs. We have to face in the first place the real deficiency of men of ability caused by the decline in the birth-rate of the abler sections of the community; and then, owing partly to the increased burdens of taxation on these same classes, we must realize that a far larger proportion of their members have entered

on remunerative employment, and that we can no longer command their unpaid services. There is a further difficulty that is not often alluded to in public, but one which is undoubtedly a deterrent to many people who might be willing to undertake public work. In nothing are the various sections of the community more greatly differentiated than in their standards of honesty, good behaviour and fair dealing. A man from one class would feel it degrading to take advantage of an opportunity which another type of man thinks it criminal folly to let slip. Accusations of bad faith and ill-conduct are made almost with impunity amongst some people and are forgotten in a week, whereas in other circles they form a barrier to any future mutual co-operation. Inherent differences like these probably constitute the greatest obstacles to any successful government by a group of associated persons coming from widely contrasted social spheres. The most sensitive and the most honourable are the first to retire from associations which are distasteful to them, and we have yet another reason for expecting to find that as time goes on the standard especially of the smaller local elected bodies will suffer a slight but progressive lowering of quality and singleness of aim.

Some of the signs of the times in this respect are not altogether reassuring. One may note constantly the differences of opinion that arise between the elected local administrative bodies and the Government offices in London. It is constantly necessary, in the interests of educational efficiency, decent sanitation, or even of straightforward finance, for the decisions of the local "representatives of the people" to be overruled by

the appropriate Government office, sometimes on the motion of a small minority of ratepayers who represent the traditions of the old "governing class." In such cases, at least, a better result would have been reached at an expenditure of one-tenth the time and money by the direct action of the older system of local government by the county magistrates, in spite of popular witticisms at the expense of the "Great Unpaid." Doubtless, as F. W. Maitland said, to be great and yet unpaid is, to some ways of thinking, a piece of aristocratic insolence.

When the local bodies are satisfactory, the divergence of aim between them and the Government departments still continues. Even the county councils are subject to constant interference and harassing restriction emanating from the central authorities, until the heart is taken out of all individual local effort and initiative, and the government of the county passes increasingly into the hands of paid officials, local and imperial, who soon learn how to manipulate the strings of the dejected elected bodies.

The late Professor Maitland, one of the most sound as well as the most brilliant of English historians, called attention to the certain appearance of this especial difficulty when, in 1888, proposals were laid before the country for replacing the administration of county affairs through the justices by a scheme of local government through representatives of the people, elected on to county, district and parish councils.

"The average justice of the peace,"[1] he wrote, "is

[1] "The Shallows and Silences of Real Life," *Collected Papers*, vol. i.

a far more capable man than the average alderman, or the average guardian of the poor. As a governor he is doomed, but there has been no accusation. He is cheap, he is pure, he is capable, but he is doomed; he is to be sacrificed to a theory, on the altar of the spirit of the age."

Maitland foresaw clearly that the smaller elected bodies would be far from satisfactory, that it was almost impossible that they should attract into their service men of the same calibre as had formerly taken charge of local affairs. He regarded them chiefly as a means of accustoming an uninitiated electorate to more important duties of national control. "There will be jobbery and corruption, incompetence and extravagance, very possibly there will be gross injustice. Then will come the cry for ever fresh interferences on the part of the central Government, for more State-appointed inspectors, accountants, auditors; but if the lesson of the past fifty years has really been of any good to us, the cry should be resolutely resisted. The local bodies should be left to flounder and blunder towards better things. A local board under the present pressure of central government is a sorry thing: a body which, if it is unwise, is futile; which, if it is wise, is governed by its clerk. That pressure should be lightened; there is no good in half trusting men; they should be trusted fully or not at all. The fullest trust, however, does not necessarily imply that the person trusted is wise; it may well mean only that he ought to have an opportunity of showing himself how unwise he is. Give the local 'authorities' a large room in which, if they can do no better, they can at least

make fools of themselves upon a very considerable and striking scale."

This analysis and forecast of twenty-three years' standing, by the foremost historian of English law and local government, is very interesting in its completeness, and shows a profound knowledge of social conditions and of human nature. But his advice has been disregarded ; the cry for more inspectors, accountants and auditors is heard on all sides, and the nation may be in the hands of a bureaucracy before it has been allowed to learn what democratic government really means.

Maitland was one of the few Englishmen who had at once a real grasp of political theory and an unrivalled sight, based on historic knowledge, into the character of his fellow-citizens.

In these days when our Constitution is under revision, it may be useful to discuss the question of the forms of government best suited to secure full consideration for problems of race, and proper weight to the welfare of the future when its interests clash with those of the present.

Accepting an elective House as a necessary part of a modern state, it only remains to add a word or two of caution. The lowering of the franchise to the point at which it now stands, the successive work of both political parties, may have been necessary and even desirable. It has probably resulted in a considerable fall both in experience and ability in the average type of member who is elected to the House of Commons ; but that result may have been an unavoidable concomitant of a necessary change, and would

indeed tend to make the House more "representative" in the strict sense of the word. The only question that remains is how far the "representative" principle should descend on these lines—how large a proportion of the nation should be governed by persons who are probably physically, mentally and morally of an inferior type to themselves.

But in dealing with the proposals for further extension of the franchise, a new question is involved. Hitherto, although we may know that the intelligence of the bulk of the electorate, in the main, is far less than that of a selected few, the electors have been men of recognized position, and some fixity of abode and occupation, and hence probably of some ability or competence. Their knowledge and experience have been valuable additions to the common store. But any considerable further lowering of the franchise will bring into action a different section of the community. Some of them might be desirable acquisitions: men of necessarily roving trade or profession, or men of intelligence who had fallen through no fault of their own. But on the average and in the bulk they would consist of the social failures, the undesirable element of the population, men of far less ability and competence than the present average electorate. Some of them would be men who most need restraint on their liberties, a spur to their activities, and a check on their reproductiveness. Nearly all would be in a position and of a physical type of mind and body where long-sighted views are impossible; where a promised, if illusory, chance of the amelioration of present conditions at the expense of other people, would outweigh a

thousandfold a certain injury to unborn generations. Such a class of electors would fall an easy prey to the alluring genius of the typical political "boss." To create such an electorate is to create a suitable environment in which political corruption may take root and flourish. Its establishment would lead to a further degradation of the citizenship of the working man, a degradation which is often attributed to the influence of party caucuses, themselves brought into being by the necessity of manipulating a large body of voters who have neither the instinct, the tradition nor the education to fit them for their responsibilities.

From the point of view of racial welfare, therefore, it seems as though, in an elected chamber, democratic representation of any section of the community, who, in the interests of the majority and especially of the future of the State, cannot be trusted with the management of their own affairs and the direction of their own problems of education, hygiene and subsistence, is a serious error of political philosophy. It may even be said to constitute a distinct dereliction of duty and throwing up of responsibility on the part of the citizens whose abilities have created the modern state and marked them out to be the conscious directors of national policy. The position of the negro and half-caste voter in the United States of America, and of the unenfranchised native population of South Africa, affords an instructive commentary on this portion of our subject. We believe that the "colour" line masks and conceals differences of more fundamental importance, and that these instances of political inequality illustrate a principle of far more extended application.

The history of the extension of the Roman franchise and its ultimate effects must not be forgotten. Rome, it has been said, was not made but unmade by its politicians. One can hardly overestimate the capacity for wrong-doing which lies in the hands of purely political heroes, who thrive on popular enthusiasms, and neither understand nor sympathize with the genius of development, inherent in the stocks wherein lies the true driving force of a nation. "For exactly a thousand years, the citizens of Rome (with whom those of the other cities of Italy and of other specially deserving states had gradually been put on an equal footing) had enjoyed certain privileges, but they had gained them by burdensome responsibility as well as by restless, incomparably successful hard work."[1]

As Rome became more cosmopolitan, the franchise was lowered by successive steps, until, in the third century after Christ, an emperor, not of the dominant race, the degraded Caracalla, extended the privileges of citizenship to all inhabitants of the Empire. Whereat Rome ceased to be Rome and gave way rapidly before the equality of absolute lawlessness. The influence of the stocks who had built up the State was finally destroyed under cover of such well-sounding phrases as universal franchise and the religion of mankind.

In considering the composition of a second chamber two main principles seem proper to be borne in mind. Firstly, we should aim at securing a hearing for experts in some of the main branches of human knowledge which bear on the science of government. Many of

[1] *The Foundations of the Nineteenth Century*, H. S. Chamberlain, vol. i. p. 124.

our greatest men are as little likely to be appreciated by as to appreciate the average electorate. Great soldiers and sailors, able administrators from home and colonial life, eminent economists and sociologists with knowledge of practical affairs, men of science capable of applying their stores of learning, should all preponderatingly and directly be represented in the government of a country.

Secondly, to obtain consideration for the claims of the future, it is difficult to see how some application of the hereditary principle can be foregone. Judging from history, the representatives of distinguished families are probably our most valuable national asset. The inheritance of responsibility, combined with the inheritance of privilege, was the earliest as well as one of the most effective methods evolved by the human race for obtaining a continuity of tradition and securing to the community the advantages of the instinctive habit of considering the family, especially in its future development, as apart from the individual in his relation to the present.

It is unwise to make constitutions on theoretical considerations, but if we were asked to determine the function of any two coexistent chambers in a modern state, we should say that, broadly speaking, one should represent and deal with the present population and its needs, the other should have in its charge the maintenance of the best racial traditions and the duty of exercising by legislative function a wise foresight over the future destinies of the nation. Which of these two should have the last word is, clearly, a matter of individual opinion.

We must now turn to the consideration of possible future administrative and legislative action, and we can best deal first with measures designed to check directly the growth of undesirable elements in the population.

Our knowledge of the laws of heredity is not yet complete enough to warrant drastic measures save in the clearest cases. But two such cases, often indeed merging into one, are ready for treatment.

The first is the case of those suffering from mental defects of known hereditary character. At present, feeble-minded children are sent to special schools, where they are trained at great expense on lines of education practically the same as those of the ordinary elementary schools. Save in a very few cases, they are incapable of profiting by such training. Then, at the critical age of sixteen, they are discharged from school. They are unfit to protect themselves ; and the natural result follows in early and constant visits to the workhouse, the prison, and the maternity wards of the hospitals and infirmaries. They become a misery to themselves, and a source of new generations of mentally defective citizens.

A Royal Commission has taken voluminous evidence and issued a report in favour of compulsory care and detention. Nothing stands in the way of reform save the apathy of our legislators on a question where all competent opinion is agreed, but which does not appeal to the votes of the multitude, and the perversity of some of our educationalists, who persist in thinking that they can make a silk purse out of a sow's ear.

Nearly allied to this case is that of the habitual

offender of clearly criminal type. We have already given a short account of the more sensational Continental methods of studying the subject. In England criminology has not yet become a recognized branch either of penal jurisprudence or of biological science. But the report of the Prison Commissioners for 1911 emphasizes the important fact, well known already to students of the question, that a large proportion of habitual criminals suffer from mental defect. This conclusion might have been foretold from a study of the pedigrees of unsound families. In such families we find continually that the unsoundness takes different forms in different individuals. Some will be feeble-minded, some tuberculous, some alcoholic, some habitually criminal, while some show a combination of these qualities. It is the unsound stock that is the root of the mischief; the criminality is but a symptom.

In these cases it is clear that hopes of reformation are vain. Short sentences of hard labour interspersed with periods of ill-used freedom are merely senseless in themselves, cruel to the criminal and a danger to society. The only cure is permanent detention—not necessarily under penal conditions—so that the unsoundness may not reappear in yet another generation.

Indirect methods of checking the reproduction of undesirable sections of the people must also be considered. The present facilities for habitual paupers to enter and leave the workhouse at will lead to evils which perpetuate the hereditary qualities of these parasites of society. Enlarged powers of detention should be given to guardians in cases where abuse of liberty is probable or certain. It should be recognized

as a principle of poor-law administration that those who, without adequate cause, repeatedly fail to support themselves, while we may allow them individual sustenance from the community, have no claim to perpetuate their weaknesses in future generations. The burden of their support must carry with it the right of preventing them from permanently contaminating the race.

The only direct means which has yet appeared of encouraging by legislation the reproduction of desirable elements of the nation is to lighten the burden of taxation on parents of families.

Now a bachelor living in rooms or chambers pays a far smaller contribution to the national exchequer in the shape of rates and house-duty, than does a man who has to provide house-room for a large family. Not only is the unmarried man contributing nothing individually to the future resources of the nation, since he is neither maintaining nor educating children of his own, but he also bears a share of the general expenses of rearing the present generation which is not in just proportion to his ability to pay. Bachelors, as a leading English humourist remarked, are luxuries. We may perhaps be allowed to add that in many respects their class, from the wider point of view, is a mischievous one ; and in any circumstances it is part of sound finance to tax the luxuries rather than the necessities of the nation.

A second injustice is found in the legislation which allows a brother and sister or two sisters keeping house together to pay income tax on their incomes calculated

separately, whereas a husband and wife are assessed jointly, and frequently have to pay on a higher scale in consequence; though, if one inherits from the other, the State, with Gilbertian inconsistency, charges death-dues as though the victims were in reality separate entities. Here again, we have an increased share of the burdens of the nation placed on those who have already undertaken the heavier responsibilities. The effect of this obvious miscarriage of justice has been pointed out again and again in the annual Parliamentary discussions on the Budget, and the reply invariably is that the amount of income derived from the perpetuation of this acknowledged unfairness is so considerable that it cannot easily be relinquished. The humour of this justification, with which the representatives of the British nation are apparently perfectly satisfied, does not appear to strike many people. At what exact figure, we may well ask, do the Chancellor of the Exchequer and his financial advisers think that honesty will become the best policy? Where is the lower limit of the value of the national conscience in such matters?

Irrespectively of all racial considerations, a good case can be made out for the principle of lightening taxation on the parents of families on the old theory that taxation should be levied in proportion to a man's ability to pay. In the classes that pay income tax, a man's ability to pay easily the charges of the Exchequer decreases very rapidly as the number of his children grows. Yet, owing to his increasing need of more house-room, his rates go up, and, owing to the rapid rise in the amount of taxable

commodities consumed by his household, the burdens of indirect taxation fall more heavily upon him.

An attempt to deal with this injustice was inserted in the Finance Act of 1909. An allowance was made to fathers of families equal to the tax on ten pounds of income for each child, provided that the total income was not in excess of £500 per annum.

Though the amount of the allowance is too small to do much good, the fundamental idea of this enactment is sound. Burdens on parents should be lightened. But two criticisms of the form taken by the idea must be made if it be considered from the point of view of its influence on race.

Firstly, there seems no reason to limit the encouragement to those whose income does not exceed £500. In fact, where earned income is concerned, it is fair to assume that a man's value to the community and to the race, on the average of large numbers, bears some sort of rough proportionality to the income he earns. The value is probably based in some way on the character of the services and on the scarcity of the type of man who is qualified to render them efficiently. The seeming disparity in remuneration is probably due to the fact that the scarcity of the type exercises greater influence than the character of the services. Before we decide that a man is overpaid, we require to know how many persons there are able and willing to replace him. Doubtless, this opinion will be disputed, and the large gains of, let us say, a stockbroker compared with the miserable pittance which rewards the labours of an immortal poet. Yet the general public is apt to grudge any sort of extension

of copyright, by which the poet might receive a more adequate remuneration, and suggestions have been made, emanating, we believe, from a labour party, that some authority should have power to declare any transcendent piece of literature at once to be public property, without more ado. Then again every man is obliged to pay his stockbroker, whereas a great number of people pride themselves on borrowing all the books they require from a lending library for the sum of one guinea a year, showing clearly the relative values they themselves attach to the two types of service. However, exceptional cases affect average results to but a small extent. Broadly speaking, a successful man is of use in the world and earns a better income than a failure who can barely pay his way. We conclude then, firstly, that the present limit of income beyond which no relief of tax is given to a father of children should either be abrogated altogether or else raised very materially.

Secondly, if we accept this conclusion another follows. If, as at present, a fixed sum is allowed for each child, irrespective of the income of the father, it may be a considerable relief to the man of small income, whose natural standard of expense is lower, while being inconsiderable when the income is larger. Indeed, we may go further, and say that since the relief given to the man of small income must be provided by raising the general scale of the tax, the more competent man of larger income will be made to pay for the advantage of the less competent man of smaller income, and the racial effect may actually be bad.

We see, then, that the only sound principle would be

to make for each child an allowance which rose in proportion to the income of the parents till a limit was reached depending on the amount reasonably to be spent on the maintenance and education of children in the upper classes.

A precedent already exists in the allowance now given for money spent on life insurance. On this money the tax is remitted up to an amount not exceeding one-sixth of the total income. So in the other case —money spent in the maintenance and education of children should be exempted altogether from income tax, provided it does not exceed, let us say, one-half of the parent's income, or exceed the natural maximum we have indicated above.

Moreover, in schemes of graduation, such as are now in force both at the upper and lower ends of the scale of incomes, it should not be forgotten that when a man has to support a wife and family the total income is really divided among many individuals. The higher scales of payment should be applicable only when the income *per individual* exceeds the limit, and should not be determined by the total income as it rightly is in the case of a single man or woman.

In a previous chapter we have given some account of the legislative action taken in ancient Rome and modern France to deal with the evils of the declining population. Coercion certainly proved useless, and would as inevitably fail, should it again be attempted. The principle which seems to define the sphere of legislation in matters affecting morals, is that a man can frequently be prevented from doing wrong, but he can-

not be compelled to do right. Right thinking, right living and right doing spring from an inborn sense of duty and rectitude of conscience. Wrong doing is far easier to check since, in its more usual forms, it is as often the consequence of want of will, bad habit and unfortunate environment as of intentional, deliberate evil action. It is perhaps correct to say that well-doing is the result of a conscious direction of action, and that much ill-doing is caused merely by lack of any intention, either good or bad ; it is, in fact, too often only the result of following the course of least resistance. As the phrase goes, it is possible to *cease* to do evil, but it is necessary to *learn* to do good. Where then, as in France, efforts are made to encourage a population to resume a line of conduct which is beneficial to the State, it would be natural to lay more stress on religious and educational influences than on any scheme of payment by results.

It is extremely desirable that no economic pressure should be exerted against parents who are bringing up families likely to be of racial value, and it is well to relieve such persons of all possible financial burdens in accordance with the requirements of their station in life. But it is doubtful whether any monetary advantages, to the extent that are likely to be given either in France or England, will alter appreciably the state of affairs, though a sympathetic attitude of the national conscience on such a point is likely to have great effect. The result of the French legislation will be watched with deep interest ; but far more hopeful is the general attention to the subject aroused throughout the country. Unfortunately it is one of

the most lamentable results of the internal political condition of France that the State and the Church can no longer work together openly in their efforts to deal with the problem, and that the educational world is torn asunder by the religious and anti-religious forces of action and reaction.

However that may be, the decline in the birth-rate has now become general throughout Western Europe and North America, and it is perhaps not likely that nations whose chief aim appears to be progressively to increase the material comforts of life will return easily to conditions which denote simpler surroundings and a sterner sense of duty to the future. It must be noted, however, that in Japan, in spite of much material prosperity, during the past twenty years the birth-rate has shown a considerable increase, rising from about 27 to 33 per thousand; so that the shrinkage of population among the European races may be compensated for ultimately by sustained increase of the Asiatic peoples. As we said before, in dealing with the question of migration, for the more advanced classes of a nation to exert themselves to raise the general conditions of environment, without taking advantage of the fact to fill up the improved spaces so created, will lead inevitably to an increase in the number of inferior citizens, for whom the conditions of existence have, through no merit or exertion of their own, become easier. In the same way, if the Eastern nations, while retaining their simple, less exacting standards of life and different sense of racial morality, can profit by our improvements in hygiene, take advantage of our increasing medical knowledge, and

utilize the inventions which represent the life-work of our men of science, our inventors and our captains of industry, they must of necessity supplant the European populations, wherever the two races come into contact with each other.

CHAPTER X

THE PURPOSE OF LIFE

In the preceding chapters of this book we have dealt with some of the most tremendous problems that are now exercising the powers of contemporary thought. We have desired, not to attempt to solve these problems, but to draw attention to their existence, and, while indicating the many and varied aspects from which they may be considered, to show that one principle—that of heredity—is to be found affecting them all.

It would be presumptuous to suggest that any person or any group of persons could hope, at this present time, to find a solution to questions that involve the most fundamental facts of existence. The evolution of thought is as painful and as searching a process as the evolution of race, and both of them will last till the world's end. Constructive thought is seldom exclusively the action of a single mind, but the result of many minds, working in many directions, accumulating, comparing and creating as best they may, until some genius arises who is able to discard the unessential, who can divine order beneath the chaos, penetrate to the core of the mystery, and register on behalf of humanity yet another well-marked step in advance.

Heredity, as a subject of study, is still in its infantine stages of development; even in the laboratory, it is hardly yet started on its way. Indeed, if we are to accept Bacon's dictum, it is only just beginning to be a science, since it is within the working lifetime of men of middle age that it has yielded itself to the experimental methods of investigation. As regards its influence on society as a whole, the subject has scarcely advanced out of an embryonic state. We can only observe, inquire, surmise and draw tentative deductions, according to our several abilities and opportunities.

The influence of heredity is seen to be at work on all sides of us throughout the animate world; the races of men offer no exception to the field of its activity. The power of variation, of developing good or evil qualities, of advancing or falling back in inborn value, appears to be an inherent possession of the organic world; and on these variations heredity plays, as a blind musician chooses his notes to make a tune, trying one and trying another, but always stumbling on under the uncontrollable impulse of creation, till apparently chance sounds fall together, and harmony emerges out of discord. As subtle, as unexplained, as fundamental as gravity seems to be the influence of heredity, wherever we turn and survey the races of men.

When, during the last century, Lamarck, Darwin and other workers brought to light the facts which led to a renewal of the old idea of the evolution of species, and Darwin and Wallace enunciated the principle which suggested a *modus operandi* of evolution and revolutionized modern thought, they could supply no ultimate

reason for this process of continuous creation, no underlying meaning in this painful and never-ceasing evolution. Natural selection gave an explanation of the means by which modifications of species might be brought about, but a knowledge of the means does not banish the need of some more fundamental principle as an underlying cause. When once the field of inquiry is extended to the human race, we cannot be content to survey the movement from a distance, or merely to enrol its multitude of curious manifestations in our note-books. We require to know what impulse there is behind this constant creation and readjustment of life, or possibly, what life is to be found behind this constant impulse to create and renew. Why, indeed, are we any of us any more than comfortable cockle shells, eminently adapted to their environment and safely ensconced in a nook of the ocean's bed?

The older writers on these subjects began at the other end of the story. Every mythology, every religion, tried to suggest a reason for the development of ever higher and higher types of living forms, and postulated a life and a consciousness behind the act of creation. But they were unable to suggest the methods of the action in any convincing form, except to express an intuitive belief that it was very good and that the morning stars sang together at the sight thereof.

Now at every stage of knowledge this intuitive induction is needed if we are to make any attempt to touch ultimate verities. The poet, the prophet and the philosopher can always find somewhere an appropriate field of action. When they are absent, we are conscious that life and thought are moving on a lower

plane. But, if our sphere of knowledge is to grow, we need men of science also to ask not why, but how, things are what they seem. For a time, it is best to cease from troubling about ultimate causes, and concentrate all our efforts on the problem of relations, of how one phenomenon is connected with another, of how one type of life is connected with a higher: we pass, that is to say, into a scientific age.

In such a period the intellectual stress is laid on the process; attention is concentrated on the mechanism; admiration is excited by the wonderful inter-relations of the wheels; we cannot see the wood for the trees, the God for the machine.

But when we get used to our new gains of knowledge, when we have sorted and arranged the fresh store of relations, we find that the old problems still remain very little changed. We know more about methods, and are therefore in a better position to guess at causes, but our intellectual need of such guesses is no less than before. Poet, prophet and philosopher again come to their own, and, on a wider stage, and with somewhat more chance of attaining a lasting solution, once more awake the religious instincts of mankind. They may even proclaim that their far-off predecessors drew very near to what is now recognized as probable truth—if, at all events, they take as examples those predecessors who confined themselves to their proper sphere of intuitive insight into Why, and avoided the ever-yawning pitfall of an intuitive inquiry into How.

It seems as though philosophy were once more finding its feet after being swept forward on an advancing

wave of science. Darwin and Mendel have shown the true methods of inquiry into the problems of life ; a host of followers have entered into their labours, and are now sounding the limits of the seas of the new knowledge they opened up. Meanwhile, others are making the old discovery that no grasp of the details of methods and relations lays bare the hidden ground of causes, or does away with the soul's need of asking Why ?

It is probable that the new inquiry into the Unknowable will repeat the faults of its predecessors. Some will put forward intuitive guesses into ultimate causes dressed up in the misleading garments of scientific induction. Others will misapply the intuitive method proper to poets and seers, and use it in the alien territory of natural science to build new dogmatic temples of How founded on shifting sand. It is all an old story. But, as organic evolution proceeds by choosing the fittest out of many types, so the evolution of knowledge needs the birth of many hypotheses, that a few may be called to become the sponsors of the science and religion of the future.

Let us then with the courage of rashness, but not of entire ignorance, attempt to follow some lines of thought suggested by our present insight into the problems of life.

In any branch of human knowledge the first step in advance can only be made if we assume that the subject is intelligible to our minds. Without such an assumption it would be useless to attempt to connect the phenomena in the definite, orderly scheme which con-

stitutes knowledge. We assume that the subject is intelligible, though it may well be that we shall not reach to a full understanding in any finite time.

So with the greatest inquiry of all, the tremendous problem of the significance and destiny of life. If we are to make any headway, if we are to scratch the surface of the mountain of our ignorance, we must assume that there is some intelligible meaning in it all.

We see creative impulse at work all around. Following their natural processes, plants and animals reproduce themselves up to the limit of their means of subsistence. The impression conveyed is that of a thronging, tumultuous, ever-present life, struggling into existence wherever it can find a point of attack on the inanimate matter which constitutes its vehicle and means of being. The power of reproduction and the power of variation seem infinite. External conditions alone set a limit to the expression of the creative impulse with which all Nature is instinct. Individuals are poured out in a never-flagging stream. Some, unsuited to the environment, fail to hand on their qualities ; but Nature turns undaunted to those that succeed, and through them works her will of a continually increasing and always varying store of life impregnating dead matter.

What is the meaning of it all ? What hypothesis can we frame to suit the facts, and to guide our future inquiries ? Is life itself the object—life anywhere, life of any kind, life in distinction to a dead world of inanimate matter ? Or can we trace a preference for any one kind of life, and, if so, what are its characteristics ?

Now, as M. Bergson has pointed out, evolution seems to have proceeded on three divergent tracks,

ending in the higher plants in the vegetable world, and in the animal kingdom reaching on the one hand the highly developed instinct of ants and bees, and on the other the transcendent intelligence of mankind.

It seems fair to infer that of these three courses the highest development is that on the intellectual side which culminates in man : not necessarily because of our feelings of superiority—they might well be shared by ants and bees had they conscious powers of comparison—but for two definite reasons. Firstly, man keeps bees for his own use, allowing them to multiply at his discretion, and staying their reproduction when it seems to him good. We have not yet heard of a man-farm kept by bees. Secondly, wonderful as is the economy of the bees' commonwealth, it does not show that power of growth and development given to man by his intellectual power over tools, machinery and economic organization. All individual initiative seems lost in the rigid socialism of the hive. Moreover, once their instincts had developed the effective organization in which they now live, it is probable that the numbers of wild bees which the world would support became strictly limited by external conditions, just like those of any other species of plant or animal. The number of mankind is not so limited. Any intellectual advance, when applied to economics, increases the means of subsistence, and the possible number of human beings.

It might be replied that mankind is only now in the preliminary stage passed through by bees long ages ago, when they were developing in instinct and consequently increasing in number. Our limit, like theirs, will be reached when our commercial state reaches a

hive-like, changeless perfection. Doubtless it would. But it will never become changeless while we rule ourselves by reason instead of instinct.

History shows us a gradual though intermittent advance in man's mastery over the lower animals. In civilized countries, no animal or plant of any size can exist save at his pleasure. The lion, which used to chase primæval man for sport or food, is now confined in menageries to assuage the curiosity of his children. Even the minute bacterium is being destroyed in its lair by antiseptics, or used in antitoxic serums as an antidote to the activity of its kith and kin. It seems, then, that, without undue self-appreciation, we may regard ourselves as Nature's highest and most favoured work of creation on this planet at least. All her efforts for ages past appear, on a dispassionate survey, to have been directed towards increasing the power of subsistence, and with it the number of human beings, of the different races and constitutions adapted to the different climates and circumstances of different parts of the globe.

Side by side with this increase in number we find on the whole a rise in type. It is true that certain races, such as those of the best of the ancient Greeks, seem to have died out, though they were perhaps higher in the scale both of intellectual and physical perfection than other races which survived. But we do not despair of finding definite causes for such catastrophes; and it is clear that Nature, undismayed by her temporary failures, sets to work at once to build up and consolidate new types capable of advancement. On the whole and on a broad survey, it is impossible to deny

that the average man has improved since the days of his palæolithic forebears.

As the result of our inquiry, therefore, we conclude from direct observation that, if the process of creative evolution be intelligible at all (and such an intelligibility is a necessary assumption underlying any inquiry), it has been tending for some tens or hundreds of thousands of years towards the production of the largest numbers of mankind of the highest physical and mental types.

Now such a tendency may exist without any further significance. It may represent a necessity in the nature of things as they are, with no further meaning or aim behind it. In the structure of matter and in the forms of energy with which the Universe is replete we find inherent this tendency towards evolution along different lines, one of which culminates in man. And it may be possible that we can carry our investigation no further back; that we have arrived at what, for our minds, must be an ultimate explanation.

But ultimate explanations are not recognized by science. No sooner do we succeed in reducing our conceptions of one train of phenomena to simpler terms —succeed, let us say, in connecting those phenomena with others which we can represent to our minds in terms of the relations of such physical concepts as length, mass and time—than we strive to go further, and attempt to analyse these fundamental physical concepts into others—mass into electric charge, electric charge into a strain knot in the æther.

But let us suppose the process of evolution explained in terms of mass, length and time and their

known physical relations. One fact might still stand outside our scheme—the momentous fact of consciousness. But let us even suppose the existence of consciousness reduced to physical terms and shown to follow certain collocations of matter and energy. The whole internal relations of the Universe might conceivably thus be reduced to order. Yet we should still be driven to ask what was the meaning, origin and end of the matter and energy which contain within themselves such tremendous possibilities of development, part of whose inherent necessities lead inevitably to the evolution through long and divergent series of organic forms to roses, to bees and to men. Why should time and space be such as they are, or why should such ideas be necessary to bring order into our mental picture of phenomena? Why should there be matter and motion? Why should there be forces between molecules or within the æther? Why should a Universe exist at all, or come into being out of nothingness? Especially, why is there a Universe which tends, if one may judge of it from that part we know best, to the greatest possible development of consciousness in the largest possible number of conscious beings?

Nothing is certain in science; it can only be a question of probability. But the probabilities in favour of the solar system as we know it coming to an end in time are very great. Consciousness in conjunction with matter would then be wiped out, and the whole process of organic evolution become vain.

It might be answered that organic evolution might go on in other systems though it ceased here. But

that possibility only postpones the end. Those other systems, like that of our sun, will have their day and cease to be, and the consciousness associated with organic matter would cease with them. Not only have we to face the problem of the existence of the Universe with its evolution of organic consciousness, but the further problem of its possible future disappearance. If there be nothing behind it and nothing after it, the thing becomes meaningless.

Of course if we like we can leave the problem there, and say it is meaningless, or, at any rate, must remain meaningless to us. But that is not a scientific attitude of mind, and, moreover, that is an attitude of mind which the human intelligence, for some reason or other, has always declined permanently to accept. We must assume that the scheme of the Universe, like the subject-matter of the humblest science, is intelligible.

It does not follow that we are yet, or ever shall be, in a position to investigate the problem satisfactorily. But the problem is there, clamouring for solution, even on the ultra-mechanical hypothesis we have hitherto followed. Even if "the mind secretes thought" and consciousness "as the liver secretes bile," we have got to find some intelligible meaning for a mechanical Universe which includes consciousness in its mechanism.

We may with M. Bergson give a rudimentary consciousness even to unicellular organisms if they be mobile. We may go further, and, with certain other philosophers, assign a still more rudimentary consciousness to molecules, atoms or perhaps electrons. We do not get rid of the problem, or alter its essential character. The evolution of consciousness, the seem-

ing tendency of creation, fails to be intelligible if there be nothing behind it, and if it lead to nothing more than is evident on the surface.

We have traced the consequences of the most mechanical hypothesis first in order to show that, even on its basis, we have to look further if we are to frame an intelligible account of the Universe. But the mechanical theory of life is not now in as much favour with biologists or philosophers as it was twenty or thirty or forty years ago. We can therefore probably reach a problem similar to that outlined above by a shorter road than that required by the somewhat extravagant supposition that consciousness can be explained fully in terms of physical conceptions.

If, as seems possible, biologists return to more vitalistic conceptions of life, we shall have to give up the easiest theory of monism, the theory which refers life and mind to matter. We shall have, at first at all events, to accept a dualistic hypothesis, leaving open for the time the possibility of some deeper concordance either in terms of the idealism which expresses matter in terms of mind, or in the light of some other philosophy.

For the time being we shall have to picture to ourselves mind as distinct from matter, and life as some foreign influence using matter as its vehicle. The apparent determinism in which we see life immeshed we must refer to the hampering effect of the medium in which life has to work, an effect from which it struggles to be free in the long effort of evolution, and succeeds to a greater degree than elsewhere in the comparative freedom of the human will.

So, from this point of view, we have to explain immediately the use of matter by life to evolve itself into higher and higher forms, to make ever more and more complete the incarnation of distinct personalities. Behind all this remain the deeper problems of the existence of life and of matter—possibly two problems, possibly, as on our first line of thought, in reality only one.

But whatever be the nature of matter and of life, we have to face the more immediate problem of evolution. The tendency of life and mind working in conjunction is to mould and develop a stream of germ-plasm of constantly increasing complexity, which is able to throw off at different stages of its course personalities of constantly increasing definiteness, power of choice and intensity of consciousness.

The development of conscious personalities, then, seems to be the tendency of all organic evolution. Has this tendency any meaning? Can we frame any tentative hypothesis which is consistent with what we know, and may form a basis for future investigation and thought?

Two possibilities seem open. We may suppose that a blind, inchoate stream of rudimentary consciousness runs through the structure of the Universe, and struggles to express itself, develop itself and realize its higher potentialities, by association with matter. It may be that only by using matter as a medium can this vague consciousness use its creative power and make itself into definite personalities, as a man may use a machine to do work impossible to him without it, or—perhaps a better simile—may use gymnastic

apparatus to develop his body in ways beyond his power without such aid.

The theory of a vague diffused consciousness, struggling into definite being by the aid of matter, suits well the facts of evolution, which show that many lines of advance have been tried without success, while one alone—that culminating in mankind—has set consciousness nearly free from the trammels of its necessitarian environment.

But this theory, well as it may explain some of the phenomena, may perhaps be deemed insufficient on a whole survey of the field. It has nothing to say on the deeper problems of the existence of the Universe of mind and matter, which problems underlie the view of life we are now following no less than the purely mechanical theory with which we began.

Such problems may perhaps be pushed one step further back if we assume the existence of a more definite consciousness, pervading and yet transcending all things, the origin of all mind, and, in some perhaps less direct way, of all matter too. This consciousness, universal and infinite, if it sought to develop parts of itself into finite and distinct personalities, might find it impossible to effect the separation (to speak in crude metaphors), and allow the subsidiary personalities the time, space and conditions of independent growth, without using some such contrivance as organic evolution through matter.

On either view, the development of human personalities becomes of transcendent importance ; on either view it is the method of creating conscious minds, which, if the evolutionary drama is to have any

permanent value, must persist in some way, either in their consciousness or in their effects, when the organic life of our globe has passed away, or must possess some significance independent of time and space. The question of the existence of human personality outside bodily limitations here becomes a crucial factor, and very deep interest attaches to the scientific labours of those pioneers who are now trying to bring forward acceptable evidence bearing on this problem.

All through the long æons of geological time, while evolution has led to higher and yet higher types along many lines of development, this creative impulse has been at work. Down the long centuries of the existence of prehistoric man, race after race has been used in turn to advance the great purpose. Race after race has played its part, and given place to others more capable of going further along the road. Now, when civilization is becoming common to all mankind, the dangers of one race are the peril of all. It is possible that the creative power has got as far as it can by the use of unconscious agents. Further advance may only be possible by conscious selection, and our growing knowledge of heredity, and our ever-strengthening inward impulse to apply it to the betterment of our own race, may be but the manifestation of the great hidden creative Power of the Universe as it takes a new path to turn the obstacles which threaten to block all its old roads of advance.

What is this impulse towards racial improvement that has been at work among us ; why is it checked at certain stages of its development ; what are these

arrests of progress in one direction when the stream of life appears to turn into other channels and to forsake the territories that previously it had favoured so liberally? How far are these variations, these lost opportunities, due to the action of men themselves, who, acting individually, yet with corporate effect, refuse to undertake further responsibilities, and decline, on behalf of their posterity, to accept greater risks and undergo more strenuous conditions, with the chance of reaching vaster heights and acquiring a higher development of mind and body? Is it the material on which the impulse has to work that becomes recalcitrant and unwilling, when pressed beyond a certain stage? Is it the impulse that suffers from some sort of secular decay or tidal ebb or flow? Are we, in fact, masters or at least participators in the moulding of our fate, or tools in the hand of some force which, careless of mankind, is acting without regard to the interests we believe ourselves to have at stake? All these questions, like many of the problems suggested in the body of the book, must be left unsolved, if not undefined, for the present. Yet to those persons who are following the trend of contemporary thought it is clear that a new method of attack is being devised, and that a generation has arisen whose members will not be satisfied until they have made the facts of life more intelligible.

Of all the hard facts of life, the one that we find most difficult to reconcile with our modern outlook is the amount of suffering and misery that natural selection, while bringing the action of heredity to a successful

issue, inflicts on those who seem least able to bear the burden. If there is any meaning behind such phrases as the "brotherhood of man," the "spirit of humanity," it seems impossible to stand by and watch another human being fall and sink under his load without at least trying to lend a helping hand. The less he is responsible for his own failure, the more, on the surface, does it appear necessary to relieve him of the consequences thereof. Yet much of the help given can be shown to produce greater failure and to lead to lower depths of misery. Are we to deny expression to our better instincts; or are we deliberately to increase the amount of degradation in the world by allowing those better instincts unregulated to have their way? What is the way out of our dilemma?

A very great part of the problem turns on the value we attach to suffering as an essential factor in human development, or as a necessary stimulus to human activity; and this again involves the question of what we mean by human development, and whether we consider that human development is an affair of the individual only during a transient lifetime, for which all responsibility ceases when life comes to an end. Here we are led further back, and, to answer our first question, we are obliged to find a reply to the eternal queries, Is the visible life we see really isolated in time and space? is it not in reality but a transient manifestation of a greater and permanent whole? Does life, even individual life, ever come to an end? May not suffering in the body during an earthly existence receive its interpretation in some spiritual state, for which indeed it is a form of preparation and purifica-

tion? What place does the ancient conception of purgatory, either present or to come, occupy in a modern version of the *Divina Commedia*?

To many people the answer seems clear. The Christian religion, side by side with its insistence on charity and mutual helpfulness, has always maintained that suffering might bestow as great benefits and lead to greater advantage than happiness and prosperity. All the great teachers of religion have dwelt on the essential position of suffering in the scheme of human progress, and there are very few people who have studied reverently themselves and their neighbours who can deny that suffering and disappointment have often led the way to a higher and more spiritual outlook upon life. Now it is of the essence of the Christian religion, though not invariably the practice of those who profess it, to regard apparent success or even happiness in this world as no criterion of the attainment of the real object of life, so that much of what we strive for—wealth, for instance—is an entirely illusory gain, and suffering undergone for its sake is certainly suffering in vain. Yet there is no doubt that the most ardent Christians, those who believe most firmly in the sanctity and divine origin of suffering and in the prolongation of existence beyond the threshold of this life, are nowadays among the most insistent to relieve distress and to equalize, as far as possible, the natural possessions of humanity. The old teaching that all these apparent inequalities and injustices have a meaning and a purpose, will be put right, and in some way compensated for, in another state, does not convince them of the desirability of leaving things alone here.

They are impatient to see the reign of justice begun rather than the work of purification continued. The cry to make things *fair* is heard on all sides.

If each one of us were asked whether on behalf of ourselves we wished all power of feeling pain, physical or moral, to cease, there is little doubt that a universal negative would greet the proposal. As a teacher, a purifier, a stimulus, a danger signal, we know too well its value to acquiesce in its withdrawal from ourselves, though it would frequently relieve our feelings to see the possibility of the sensation of pain removed from those who are near and dear to us. There indeed we too often watch the suffering without being permitted to apprehend the consequent gain.

Here are two old conceptions which may possibly help us to see some light in the darkness. The one is the fact that we are necessarily blind to the movements of our neighbours' inward life and cannot judge fairly of the value of the discipline. Our own feelings may be too deeply involved to give a just verdict. The case must be removed to another jurisdiction and judged on general principles. The other is the idea involved in the statement that the value we attach to suffering is derived from its beneficial effect on ourselves. But what of its value to an organism that has not capacity to learn, cannot undergo purification by such means, makes no answer to the stimulus, is incapable of apprehending the danger signal? Here we have suffering as a blind, insensate, stupefying, paralysing force. Its reason for existence ceases. It cannot be the means of attaining to a higher sphere; it is degrading, brutalizing. Then, by all means, let us deal with the problem of

suffering as best we may, bearing in mind the traditional practice of the founder of the Christian religion, which was, not to mitigate, but to cure.

Herein lies the justification of many of our social customs and enactments; herein may be found the germ of other developments yet to come. As long as we believe that a man may be improved by social pressure or deterred by individual punishment, it is right to allow these agencies to proceed, provided that pressure does not lead to suffocation nor punishment to disablement. Where there is neither chance of improvement nor hope of correction, we must devise other methods of treatment. The segregation of the feeble-minded in farm colonies, the detention, not necessarily under penal conditions, of the hopeless criminal, the lunatic and the unemployable, are among the obvious ways in which we can prevent the further degradation of the race, and arrest the increase in the volume of suffering without cruelty to any individual, restricting only in directions where the moral sense has fallen below the level of humanity and is akin to that of the brute beasts, who have no understanding.

It is among the tragic accompaniments of existence that so many people should be called into life who are unfitted to play any worthy part therein. It is perhaps even more tragic that the best endeavours of the best intentioned people should so often serve only to increase the number thereof. It is only when we come to have a nearer acquaintance with the constitution and working of Nature, when we begin to realize the possibility of the infinity of variations and combinations which she holds within, that we under-

stand why it is necessary to create with such a lavish hand and to select with such stern rigour. Multitudes must come into existence in order that, among them, the few that are worth preserving should have a chance of seeing the light. It is the same in human affairs. Hundreds of poets pour out their little volumes of song, and out of them all one man may show kinship with the immortals. He leaves many thousands of lines in which he has incorporated the substance of his mission; society seizes on a tenth part of the fabric and feels that only this small proportion of his labour was truly inspired. So, out of a large community, a few families will come to stand out above the others, for qualities of head and heart, and out of those few families, a handful of men will be born who will single themselves out above the average of their kin, one of whom possibly will tower up to become a leader of men. Socially valuable qualities, combined in balanced proportion in one individual, are the greatest of gifts to society, and society must be prepared to pay heavily for the chance of welcoming such a person. A maker of thought, a leader of men, a wise ruler, have a monopoly value which must be paid, not so much to themselves, as to their forebears and to their descendants.

The danger in front of society is twofold. In the first place, modern nations, born and bred among the rush for gold, with the cry for the increase of comfort and luxury ringing in their ears perpetually, may deliberately adopt a materialistic basis for life, cast aside their humanity, and sacrifice the soul to the

body ; returning in fact to the ranks of the animal world whence they have emerged, to find themselves at last, in their pleasures and pains, a little lower, a little less self-respecting than the beasts. In the second place, there is always the possibility of a conspiracy, more or less intentional, on behalf of societies which have advanced to a certain level, to arrest the movement of progress, to destroy the abler and more progressive stocks, to eliminate all individuality that makes the majority of mankind realize its own inferiority and the necessity of a further struggle to justify their continued existence. Every individual, dimly comprehending that he himself may be among the less favoured members of the community, may enter into this conspiracy, and secure his own immunity by a decree of universal toleration and absolute equality of opportunity and treatment. The citizen who wished to banish Aristides because he was tired of hearing him called "the just" was probably not sure that he himself was a just man. He is frequently to be met with in our modern social organization. It is invidious to specify nations or professions, where so many countries and types of character are gravely involved ; but it is almost impossible to watch French politics without fearing that for any man to succeed above his fellows is a sure sign for some combination to be set in motion which will secure his downfall. Modern states are highly complex organisms, needing a wide range of specialized faculties, distributed in different sections of the population, to enable them to survive. It is perhaps doubtful—judging from present tendencies—whether any democracy will be able to pre-

serve or re-create the conditions in which the various functions of government and social organization are entrusted to the persons best fitted by nature to discharge them. When a nation begins to be jealous of its best families and to deal spitefully with its great men, we know that a condition favouring social disintegration is at work.

Over-production is the first step towards progress; selection is its necessary corollary. It seems likely that in the future selection will be largely conscious, exercised by society at large. Any abrogation of selection will increase the classes of persons who should be on their way to social extinction, the classes who at present furnish the largest number of social parasites and show infinite capabilities in that direction. Selection exercised against the abler families and more healthy and virile stocks will result in the extermination of those persons who alone can guide the steps of human progress. Selection exercised in their favour will ultimately benefit the whole community. It is true that the discrimination of good from bad is a slow and uncertain process, and that it is easier for society to withdraw a restraining hand than to take the responsibility of decision; but it is not necessary to pronounce on what is best in order to know good from bad. It is even possible to make mistakes and to recover from them, as long as the intention to follow on the right course remains the predominating determination.

Let us return to a point we left unanswered in an earlier paragraph and allow ourselves to turn from the

practical to the theoretical side of our subject. The rise and fall of nations, the growth and decline of societies, is an assured fact. Yet the impulse towards human perfectioning works on, changing the field of its labours as imperceptibly and as surely as a river works its way from side to side of a valley. The suggestion there thrown out, that the material—humanity—on which the creating impulse has to work, becomes recalcitrant when pressed too far, deserves further consideration.

"Now understand me well," says the American poet-philosopher—"it is provided in the essence of things that from any fruition of success, no matter what, shall come forth something to make a greater struggle necessary."

Let us ask ourselves seriously whether it may not be this greater struggle, this more searching purification, that human society, once it has reached a certain level of progress and comfort, declines to enter upon. And on that refusal hangs its downfall. Instincts of social responsibility, feelings of pity and compassion, quite as much as desire for luxury and comfort, have necessarily developed to carry it thus far along the upward path.

But, blinded by the success of its mission, ceasing to perceive a paternal chastening, and feeling only punishment, shrinking from the strain of a further effort, losing sight of the eternal verities and cumbered with much serving, it stands still, hesitates and falls, pushed beyond the limit of human endurance. It is then that we need the help of religions and philosophies that postulate the divine nature of man. Where man has

failed, God working through man can accomplish his purpose. Flesh may shrink from the further conflict, but the Spirit will enter in, re-vivify it and carry it along.

But to achieve this end, man can no longer be left an unconscious tool in the hands of Fate. He must understand his destiny, take part in the shaping of his inheritance and enter upon it not as an unconscious tool, but as an intelligent helper in the divine scheme of continuous creation. Herein has come the need for revelation—for poets, and prophets, and preachers. Some part of the curtain must be withdrawn, some knowledge of the path to be trodden must be vouchsafed, in order that the traveller may at least see as through a glass darkly. No one who is entirely without knowledge of the object in view can consciously co-operate in its attainment. The whole of the modern development of science may represent the latest phase of the creative impulse, taking man into a more intimate partnership. We do not require another religion to express the further gain ; the new will transfuse itself into the old, which in its turn will discard the elements in it that have become unessential. Religion will remain what it always has been, the force binding together the human and the divine.

But, the anxious inquirer will ask, what of those who have fallen by the way, the weak, the unfortunate, the unhappy ? What place have they in this triumphant march towards progress ? If we were to assign them the place of the soldier who has fallen in the battle, still there would be a sense of failure, of injustice, in the minds of many. The soldier fell by chance, he might have joined in the final triumph ; but these others were,

according to the theories of heredity and selection, doomed to destruction. Moreover, there is the legend of the dead soldier who could not sleep in peace, not knowing and all impotent to ask, which way the fight had gone. Can we be truly participators in a success of which we are unaware ?

There is no answer to questions like these, except that we are dimly conscious of surer ways of attaining personal destruction than that of owning our weakness, and, having made a good fight, to be anxious at least not to cumber our fellow-soldiers, who are better equipped than we are. If the object of all existence be the gradual development by the use of the natural resources of the Universe of some spiritual prototype, then nothing which has had life can have lived in vain. Having once existed, may we not think that, however lowly, in some form, conscious or unconscious, it continues to exist—having been created, it forms part of the great life-giving impulse, and continues to create, contributing a small share to the spiritual equipment of the higher types, in some way analogous to the methods by which the animal and vegetable worlds contribute to their bodily sustenance.

If any such theory were acceptable, it would follow that—in another state where soul values are judged by the standard we have permitted ourselves to imagine—there would be far less lamentation over those human beings who fall apparently prematurely and wantonly by the way, than over the hundreds of thousands of unborn babes with sound parental inheritance, from whom our human volition, denying expression to its highest attribute—the power of creation—deliberately

withholds the gift of life. And Herod's part in this renewed massacre of the innocents is played by a modern representative whose name indeed is Legion. Who can fix the real responsibility? Or again, if we attribute the ebb-tide in human affairs not to the stiffness of the material but to the failure of the creative impulse, may not it be our own attitude of mind that has neglected to contribute the spiritual reinforcements necessary to keep that impulse working at the fulness of its strength?

The temerity is great which dares to deal with problems like the ones set forth in the preceding chapters of this book; even greater is the risk that besets anyone who ventures to draw conclusions or to suggest some possible interpretation of the greatest mysteries of life. Yet it is impossible to ponder on these subjects without trying to frame some sort of tentative hypothesis. To accept the view that the world around us is uncomprehensible, chaotic, purposeless, is to deny the possibility of any rational thought and the utility of any human progress.

The end is not yet in sight; it may never be attained, in spite of all the religions and philosophies which have held sway among the races of mankind. But thus much more may be said. There have been many religions, there have been many philosophies. Yet science is one. It may be that the conjunction of the three will give us some day the necessary clue, and that the seer will yet arise who can write for a future generation the authentic history of the origin and destiny of man.

PRINTED BY NEILL AND CO., LTD. EDINBURGH